



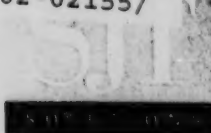
FINAL REPORT

ORGANIC FEED MARKET ASSESSMENT

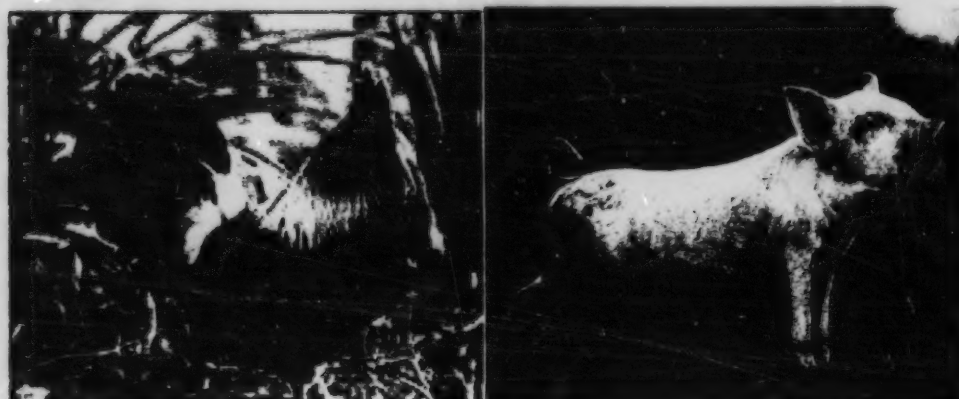
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Assessment of the Market for Organic Feed in the US and EU



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1. INTRODUCTION

□ Study Objectives

The Industry Development Branch of Saskatchewan Agriculture and Food sought assistance in order to **determine if Saskatchewan can be competitive in the organic feed market**. The objectives for this project were as follows:

- To determine the market potential for organic feed products:
 - potential demand for organic feed products
 - summary of existing/potential processing capacity
 - competitive analysis (SWOT)
- To determine the most significant barriers to entry (physical, trade, etc.), risks and costs associated with pursuing the processing of organic feed products in Saskatchewan.
- To identify the most viable organic feed markets.

The **project components** identified by Saskatchewan Agriculture and Food were:

- Market Intelligence and Information
- Definition of Market Opportunities and Outline Potential Barriers to Entry
- Transportation Costs
- Factors/Trends Driving the Marketplace
- Economic Impact

The **recommendations** were to focus on the following:

- Determination of whether there is a viable, long-term market opportunity for organic feed products.
- Identification of the most viable markets for organic feed.
- Definition of steps to develop the sector and enter target markets.

1.2 Executive Summary

Demand

The organic retail sector is growing rapidly throughout the world. In 2000, global organic retail sales were about 20.5 B US\$ and could reach 36.1 B US\$ to 46 B US\$ by 2005. Estimates of the retail market are shown in the following table.

Retail Organic Sales by Country, M of US\$

	1997 Sales	% Total Food	Total Food	Annual Growth %	2000 Sales
Germany	1,800	1.2	150,000	10	2,500
Italy	750	0.6	125,000	20	1,100
France	720	0.5	144,000	20-25	1,250
Great Britain	450	0.4	112,500	25-30	900
Switzerland	350	2	17,500	20-30	700
Netherlands	350	1	35,000	15-20	600
Denmark	300	2.5	12,000	30-40	600
Austria	225	2	11,250	15	400
Sweden	110	0.6	18,333	30-40	400
Other Europe	200				500
USA	4,200	1.25	336,000	15-20	8,000
Japan	1,200				2,500
Australia	130			400	170
New Zealand					59
Argentina					20
China	6				12
Taiwan	10			200	10
Philippines					6
Canada	500			15	760
Mexico	12				18
ITC, Willer & Yussefi, and Lohr					

Market growth will depend on increasing both the number of customer and the proportion of each customer's food dollar spent on organics. In Europe in particular countries with a higher organic share of the total retail market tend to have a greater proportion of regular purchasers of organic products.

Price may be a barrier to increasing the number of regular purchasers. Irregular purchasers tend to be price sensitive.

Price differentials for organic foods vary by country and by product. The size of price differentials is related to the extent of organic food distributed through supermarkets. Supermarkets have lower distribution costs and focus on volume rather than value. Widespread distribution is important to the expansion of markets.

The size of the price differential is also related to differences in the cost of production. Organic beef is relatively inexpensive because grass is a large component in its feed. Organic poultry and pork is more expensive because these animals must consume greater amounts of organic grain.

Confusion by consumers about organic labels may limit market expansion.

Food safety concerns such as BSE, foot and mouth disease, and GMO's is increasing the demand for organic products.

Supply

Organic agriculture is increasing and in 2001 there are about 15.67 M hectares of organic land in the world. Australia and Argentina account for almost 70% of total organic area.

Europe has embraced organic farming. The number of organic farms in the 28 countries of Europe has grown from 6,655 in 1985 to 163,032 in 2000. The 15 countries of the EU accounted for 88% of European organic farm numbers. The EU 15 had almost 4 M hectares of organic land in 2000. Over 50% of organic land in the EU is in grass and fodder crops. Expansion of organic agriculture in the EU grew quickly after organic legislation was passed in 1991. The EU also provides significant amounts of financial and non-financial support to the organic sector.

Organic agriculture in the US has not grown as quickly. In 1997, official estimates place the number of organic growers at 5,000 and the organic acreage at 0.84 M ha. Over 60% of organic land was in pasture in 1997.

Target Markets

The US is the largest market following by Germany, Japan, Italy, France, and the UK. Within the EU, the fastest growing markets are Denmark, Sweden, and the UK. Data availability, market size, and growth focused our attention within the EU on the countries of the UK, Denmark, France, and Germany. The US is the final target country.

Surveys (see appendix) were sent out to organic feed mills and end-users in the target countries. The response was very underwhelming. Information received did support the preference for local production. US respondents were only interested in sourcing organic ingredients. A survey was also sent to Saskatchewan organic producers (see appendix). Again, the response rate was very low.

Market Potential

In assessing the market potential for Saskatchewan organic feed producers and processors we examined the growth in the demand and supply of organic meat, poultry, eggs, and dairy products, the current supply-demand situation for organic feed and prepared feed, and market assess issues.

An examination of the market potential in the UK found that:

- The production of organic meat is growing rapidly. However, because of a lengthy conversion period, high production costs, and shortages of organic animal feed, organic livestock will still represent less than 1% of total livestock in 2010. In 2001, it is estimated that there were about 12,6000

organic beef animals, 130,000 organic sheep, and 60,000 organic pigs. In 1998/99 there were 190,000 table chickens.

- The price of organic broiler rations ranged from 420 US\$/tonne to 436 US\$/tonne in 2000 while organic layer feed ranged from 405 to 483 US\$/tonne. Organic pig feed ranged in price from 420 to 467 US\$/tonne. Organic rations for beef animals were the least expensive and ranged in value from 234 to 467 US\$/tonne.
- While more imported cereals are required; these products will be sourced in Europe. Non-GMO protein feed is required.
- A survey by the Australian government regarding imported prepared feeds found that UK organic feed mills were not prepared to imported prepared feed for the following reasons:
 - Inadequate margins
 - Availability of organic grain in Europe
 - Regulations allow feed to contain 10% to 20% non-organic components until 2005. The mills produce to the minimum of the regulatory requirements.
 - Tariffs on prepared feed can be high.
 - The organic philosophy has a strong preference for production and consumption to occur in close proximity.
- Discussions with Saskatchewan certifying bodies revealed that some Saskatchewan producers are experiencing market access difficulties because of the requirement for ISO certification.

An examination of the **market potential in Denmark** found that:

- The major organic sector is dairy. The domestic organic dairy market is saturated because consumption is growing at 3% while production is growing at 10%.
- Consumption of organic meat is about 6,000 tonnes. Organic egg production is significant and represents about 8% of total production.
- There is little demand for imported prepared organic feed because of the following:
 - Regulations allow animals to be fed lower percentages of organic content until 2005.
 - Tariffs can be high.
 - There is a preference for local production.
- in addition, Danish labeling regulations are biased towards domestic processing.

- The requirement for ISO certification can be an impediment to market access.
- Organic grain is imported from Germany, the Netherlands, and Eastern Europe where there is low prices and excess supply.

An examination of the **market potential in France** found that:

- The production of organic cereals is increasing. Organic protein is in short supply and is limiting pig production. The largest sector is poultry. It is estimated that 170,000 free-range chickens are produced each month. The most growth is occurring in organic pigs, table chickens, and sheep.
- There is a well-developed organic feed market.
- Barriers facing Saskatchewan manufacturers of organic prepared feed include:
 - EU allowance for non-organic content.
 - Potentially high tariffs.
 - Preference for local production.
 - High transportation costs within France that increases the tendency for production and consumption to occur in close proximity.
 - EU requirement for ISO certification.
 - Lengthy process to obtain import certificates for non-Article 11 countries.
 - Cultural and language differences.

An examination of **market potential in Germany** found that:

- Germany is almost self sufficient in organic grain. It had about 90,000 hectares of organic cereals in 1997. Prices have fallen because of trade liberalization, CAP reform, and the availability of cheap imports from Eastern Europe.
- Organic meat sales are growing by 25% annually. There is an excess supply of organic milk because of infrastructure gaps. Germany is the second largest producer of organic dairy, beef and hogs in the EU.
- The market for organic prepared feed is extremely competitive. Product is sold in bulk or bags and generally moves direct from the mill to producer. In 2000 the prices for organic feed for poultry, cattle, and pigs were 367 US\$/tonne, 286 US\$/tonne, and 310 US\$/tonnes, respectively.
- The barriers facing Saskatchewan manufacturers of prepared feed to enter this market appear even larger than in the other target markets. According to a survey by the Australian government, Germany mills would not source organic feed from outside the EU because Bioland and Naturland (major certification bodies) prohibit imports of organic feed from outside the EU. Mills that did so would lose their organic status.

□ Other barriers include:

- Germany is largely self sufficient in organic cereals. German organic mills source soybean from Europe, potatoes and protein from the Netherlands, and corn from Austria and Hungary.
- Tariffs and ISO 65 requirements can limit access.
- Lengthy process to receive import license.

An examination of the **market potential in the US** found that:

- The production of organic crops, dairy products, and eggs has grown by 20% annually since 1992. The production of organic meat and poultry was slower because this production could not be labeled as organic until 1999. Other factors that have slowed the growth of organic meat and poultry include managerial and start-up costs, lack of economies of scale, conversion risks, higher production costs, organic manure treatment requirements, and longer conversion periods.
- There are three areas of more concentrated organic livestock production; the west coast, the northeast, and the Chicago-Midwest hub. In 1997 (last official organic data), organic beef production primarily occurred in Michigan, Missouri, South Dakota, and California. After 1997, beef production has grown significantly in Colorado. Organic dairy was concentrated in New York, Wisconsin, Minnesota, Pennsylvania, Maine, and California. Since then, organic dairy production has increased significantly in California and Maryland. In 1997, organic hog production was found in Washington. Organic laying hens were found in California, Virginia, Pennsylvania, and Ohio in 1997 while broilers and turkeys were found in Pennsylvania, and New Mexico, respectively. Since that time the production of organic poultry has grown significantly in North Dakota, New Hampshire, and Pennsylvania while egg production has grown in California, Virginia, Pennsylvania, and Ohio.
- Organic feed mills in the US are concentrated in the three primary production areas.
- A survey of US feed mills and end-users found that the preference is for local production. There was some interest in organic flaxseed to replace organic non-GMO soybeans. Some organic certification agencies such as the OCIA require 55% of organic feed to be produced on farm or in cooperation with local producers.
- Discussions with Saskatchewan certification agencies found that the premature implementation of the new US National Organic Program is limiting access for some Saskatchewan organic producers.

Barriers to Trade

The study examined three types of trade barriers; regulations, tariffs, and GMOs.

As the review of market potential has indicated, there are **significant regulatory barriers to trade** in the organic prepared feed and feed sector. There is no alignment between Canadian, US, and EU organic regulations. This lack of regulatory harmonization is itself a significant trade barrier. The situation is magnified in the EU because of the multiple overlays of regulations.

The most significant regulatory barrier is the EU's regulations on organic feed that allow for non-organic content until 2005. The EU is clearly willing to accept lower organic content until supply catches up with demand. The regulations exclude GMOs for use in organic production.

The EU's requirements for **importing organic product** also inhibit trade. Products imported from countries recognized as having equivalent standards and inspection systems (Argentina, Australia, Hungary, Israel, Switzerland, and the Czech Republic) are treated as if they were produced in a member country. Competent authorities in each member state must authorize imports from other countries. **Until 2005, member states can issue import permits from "third countries" like the US and Canada.** The importer must prove that the products have been grown and processed equivalent to EU regulation and that inspection processes were equivalents (ISO 65). Once the product has been imported, it can move freely within the EU.

In the EU, products containing more than 95% organic agricultural ingredients can be labeled with an organic label. Products containing between 70% and 95% organic products are labeled as partly organic. These regulations are less stringent than US regulation.

The US has a new National Organic Program (NOP) that will be fully implemented by October 2002. **The US NOP regulations regarding organic feed are not as flexible as the EU.** Although organic livestock must be fed organic feed, the regulations allow for temporary variances in the event of natural disasters, etc. As in the EU, GMOs are not permitted in organic products.

The USDA reviews certification programs under which imported organic products are produced under NOP standards. Certifiers in foreign countries can apply for US accreditation or receive recognition through equivalency agreements between the US and foreign government or through US recognition that foreign government authority is able to assess and accredit agent as meeting NOP standards. Currently one Canadian certification body has applied for recognition.

In the US, product containing 100% organically produced raw or processed agricultural product (excluding salt and water) can be labeled as **100% organic**. Product with not less than 95% organic content can be labeled as **organic**. **"Made with Organic"** products contain at least 70% organic agricultural products. Products with less than 70% organic ingredients can use organic only in the ingredient list. Imported products meeting NOP requirements can be labeled organically produced.

Organic feed grains face a tariff barrier in the EU. The size of this barrier ranges from 47 CDN\$ to 120 CDN\$ per tonne. **Organic peas and flax can move into the EU tariff free.** Conventional product already moves there and there is much antidotal evidence of Saskatchewan organic peas being sold in the EU. **Prepared organic feed may face a tariff barrier in the EU.** The size of the tariff is dependent on the composition of the prepared feed. There are no tariff barriers for Saskatchewan organic feed and prepared feed moving into the US.

The EU countries have rejected the production, use or import of **GMO crops** and the EU will **prohibit GMO's for the foreseeable future.** The adoption of the GMO crops has been fast. The net effect is the lowering of the amount of conventional grain that could be included in organic rations even at low rates. The rapid adoption of GMO canola is particular problem for western Canadian organic growers. It's unlikely that with the ability of canola pollen to spread with the air currents that there is any 100% GMO free canola in most areas of western Canada. There is also no generally acceptable test for the presence of modified genes. This has the effect of cutting off trade from any area where GMO's are grown to any area where they are not accepted.

Competitive Advantage

The study examined supply chain costs and the strength of competitors in order to assess Saskatchewan's competitive advantage.

The **supply chain costs** for the movement of organic product from **Saskatoon** to selected US markets were estimated to be as follows:

- ❑ Cost to access **Midwest markets** by Rail range from \$35 –45 whereas trucking costs range from \$50 –90 dependent upon the carrier. Intermodal freight is not a competitive option to this region.
- ❑ Cost to access **Eastern US markets** New York and Pennsylvania by Rail range between \$61 –70 dependent upon if the delivery is to a short line carrier. Truck costs to this region range between \$150-180 per tonne. Intermodal costs range from \$127 to 178/ tonne and are less than direct trucking.
- ❑ Costs to the **Pacific Northwest and California** for rail range from \$44 to 70/ tonne and for truck from \$92 –150/tonne. Intermodal costs were \$130-148/tonne.

Analysis was performed on the **transportation cost to the EU** for Saskatchewan, North Dakota, and Czech Republic producers. To benchmark the market costs of Saskatchewan producers relative to North Dakota and Eastern European producers we used **Antwerp** as a basis. The following compares the costs in CDN\$/tonne.

Origin

Saskatchewan	\$ 135-140
North Dakota	\$ 130 - 134
Czech Republic	\$ 47

Thus, an Eastern European producer has at least an \$80 freight cost advantage in this market as compared to North American suppliers. Producers in North Dakota face lower transportation costs to Antwerp than Saskatchewan producers.

Organic producers in the US face lower market entry hurdles into the EU than Canadian producers. This is primarily because the US has enacted a national standard for organic agriculture. The examination of the transportation costs indicated that North Dakota producers faced slightly lower transport costs into the EU. The chapter on the US market contains detailed information on organic production in the US.

Eastern European countries are strong competitors in the EU organic market. These countries face lower transportation costs. In addition, the EU treats some countries, like the Czech Republic and Hungary as equivalent in terms of importing. This gives these countries much better access than either Canada or the US.

The study identified the following strengths, weaknesses, and issues for the export growth of organic prepared feed and feed ingredients.

Strengths:

- ❑ Growing demand for organic meat, poultry products, eggs, and dairy products.
- ❑ Growing demand for organic flax because of the need to replace organic soybean in feed rations.
- ❑ Growing demand for organic protein feeds in the EU.
- ❑ EU market acceptance of Saskatchewan organic peas.
- ❑ Canadian reputation for a pristine environment.
- ❑ Extension by small certification bodies.
- ❑ Good backhaul potential for some US regions.

Weaknesses:

- ❑ High transportation costs to EU market relative to competitors.
- ❑ Growing self-sufficiency in organic feed in the EU.
- ❑ Canola has been polluted by GMO varieties.
- ❑ Lack of industry infrastructure – data; research and development; human resource training and development; organization; strategic marketing and promotion;

- ❑ Export orientation of organic grains and oilseeds producers limits industry development – livestock; value-added enterprises;
- ❑ Preference for locally produced organic animal feed and extensive use of roughage in livestock diets (sometimes enforced by regulations) limits export potential.
- ❑ Fragmentation and smallness of sector makes it difficult to guarantee consistent supply of animal feed to large-scale buyers.
- ❑ Marketing is predominately relationship based which inhibits information sharing and market access.
- ❑ Whole farm focus in organic agriculture limits specialization and trade in organic feed.

Issues:

- ❑ Lack of Canadian mandatory standards.
- ❑ ISO 65 certification – market access requirement; cost;
- ❑ Subsidization of organic production by the EU.
- ❑ Patience shown by EU for organic feed supply to increase.
- ❑ Premature enforcement of new US organic standards.
- ❑ Industrialization of organic sector in the US.
- ❑ Lack of harmonized international organic standards.

Recommendations

Our first recommendation concerns the development of the **Saskatchewan organic prepared feed and animal feed sector**. Our market evaluation did not reveal major market opportunities for organic prepared feed exports. Regulations and the organic industry's preference for local production, roughage based diets, and for imports closer to "home" reduce the export attractiveness of prepared feeds. In the EU, organic protein appears to be in short supply and that may be an opportunity for Saskatchewan producers of peas and flaxseed. Saskatchewan organic feed faces stiff competition from Eastern European sources. Countries like the Czech Republic face very low transportation costs in major EU markets and have much better access to these markets because their organic standards are viewed as being equivalent to the EU. Organic prepared feed and feed grain can face significant tariff barriers in the EU. Organic production in the EU is likely to continue to grow rapidly because of the generous subsidies that it receives. In the US, our survey did not find any feed mills or end-users interested in importing organic prepared feed from Saskatchewan. Again, organic protein is in demand and this can provide opportunity for producers of peas and flaxseed. We see two different strategies to develop the industry; product differentiation and broader industry development.

In the **product differentiation strategy**, users in the target markets would have to be convinced that organic feed and prepared feed from Saskatchewan is a superior product compared to what is available in their countries. Some options to implement this strategy are as follows:

- Prove that the production of livestock in the EU or USA using Saskatchewan produced organic feeds was **better for the environment**. This could be done by an examination of the energy use, greenhouse gas emissions and environmental impact as proposed above, but including the feed production process. The approvals would need to come from Organic certifying bodies and trade bodies within each target market. The question to be answered, "Is there an energy use, green house gas emission and/or environmental impact advantage to Saskatchewan organic feed production?"
- Develop a market pull approach by **convincing organic consumers** within each target market that animal products produced using Saskatchewan produced organic feed were better than those produced using other organic feed. This is a large consumer marketing challenge. Saskatchewan organic feed producers would have to form agreements with livestock producers, processors and retailers in each target market to be successful. The question to be answered is "Will the organic consumer would pay extra for a product in the organic market supported by a large advertising and market campaign?" "Who are potential partners in which market?"
- Develop joint ventures with producers in target markets based on **production advantages that result from using specific feed formulations available from Saskatchewan produced organic feed**. These could include animal health benefits, quality and/or purity guarantees and exclusion of ingredients only available from Saskatchewan source. The question to be answered is "What production benefits can be offered by feed produced in Saskatchewan versus the other areas or local production?"

The alternate strategy for industry development is to **leverage growth in Saskatchewan organic prepared feed and animal feeds through the expansion of the Saskatchewan organic livestock industry**. If Saskatchewan continues to focus exclusively on exporting organic feed grain, little economic activity or value-added processing will be created in the province. The review of the market clearly demonstrated that in the target countries the feeding industry developed in response to organic livestock production. Tailoring the development of Saskatchewan's organic feed sector to the needs of an emerging provincial/western Canadian organic livestock sector would enable both sectors to expand faster and with less risk. A larger provincial/regional market for organic feed would also reduce the residual organic feed production that is sold in the conventional market because of a lack of opportunities. **The development of an organic livestock sector would create more economic value-added.**

The second recommendation is about **strategic positioning for the organic industry**. The Saskatchewan industry has many strategic positioning options available to it. For example, it could market its products as low cost. Alternatively, it could market the integrity and quality of its products. Yet another alternative is to highlight Saskatchewan's pristine environment.

Our examination of the market indicates that that billing its product as low cost would be a poor choice for Saskatchewan organic producers/processors. Inexpensive could be viewed to be the same as low quality/poor organic integrity. While costs matter in production, they are less important in marketing in the organic sector. Relative to other competitors, Saskatchewan is not necessarily the least expensive source of organic feed. **The organic philosophy is much more in alignment with using integrity and product quality to strategically position the industry. This should be accentuated with environmental purity.**

Our recommendation, therefore, is to **develop strategic marketing plans that portray Saskatchewan's organic sector in terms of organic integrity and purity, accented by the pristine environment.** It may also be possible and desirable to link these development efforts with the natural beef and bison sectors. **This could enable the creation of a critical mass of branded Saskatchewan products.**

Our third recommendation is to **grow and develop the organic industry through collaborative efforts of producers, processors, service sectors, educational institutions, and government.** If the industry is unable to grapple with the ISO 65 issues, then the government must step in. The question of whether Canada should have mandatory or voluntary organic regulations needs to be reviewed. The voluntary approach does not provide consumers any protection and may be interpreted globally as laxness. Research and development needs of the industry must be addressed as well as extension and information needs. Asymmetric and incomplete information hinders the broad-based development of the industry. Efforts should be made to change this. It may be desirable to tackle these issues at the western Canadian level rather than at the provincial level.

There are a variety of industry developmental models that could be adapted. Denmark is currently implementing its second organic strategy. It formed the **Organic Food Council.** Its mandate is to encourage, watch, and assess development opportunities; assess advisory and research efforts; develop proposals for development activities; and comment on organic standards. The Council has many initiatives beyond the expansion of primary production. For example it is attempting to increase product quality and stimulate product development; boost domestic sales; develop nearby export markets; protect and grow the organic brand; and promote the industry to environmentalists and governments.

The **Organic Centre for Wales** at the University of Wales, Aberystwyth is a good example of an organic center of excellence. Its main activities include research and development; training and education (including a BSc Organic Agriculture); organic demonstration farm network; advisory services; and publications.

The **State of Minnesota** assists the organic sector in a variety of ways. A small amount of financial assistance is provided to producers converting to organic production. Farmer initiated research is supported through grants for on-farm

demonstrations. Department staff provides technical information to organic growers. The department also provides assistance for market development, consumer education, and trade shows. The University of Minnesota has a multi-year organic conversion program that involves research, education, and production support.

1.3 Feeding Basics

When raising domestic livestock there are several considerations when it comes to providing optimal feed rations. The basics apply whether considering organic or non-organic production. Please see the **Appendix for further information on animal feeds and organic chickens.**

Feed Ingredients

Feed ingredients are divided into four macro groups; fiber feeds, energy feeds, protein feeds and supplements. All animals raised for milk, meat or eggs require different amounts of each of these groups to be healthy and productive. The amount of each group of feed required by an animal will vary based on the type of animal, age, growth stage and the goal the productive goal of the time period when the feed is being used. Analysis of feed ingredients and the knowledge of standard nutrients requirements of animals at different productive phases allow feed specialists to develop balanced rations that maximize animal productivity and health.

A particular feedstuff like barley maybe contribute to filling an animals' need for all of the macro feed groups, however the feed ingredients are generally assigned to the particular group based on the highest contribution. For example, feeds with high protein content are regarded as protein feeds even though they might also contribute fiber, energy, and vitamins.

Conventional animal agriculture bases the feed usage on least cost approach, the source of the feed is not as important as the developing a ration that fills the requirements of the animal during a particular growth phase at the lowest possible cost. This attention to using the **lowest cost approach has developed several practices, which are not obvious but have become widespread.**

- 1) The use of **organic waste products** from other processes as feeds. Many processes such as alcohol production, cheese making, or animal rendering provide items, which can be used in some amount in feed rations. Because these waste products are not the primary object of the process and because many of them are costly to dispose of, their use by feed manufacturers at low cost is positive response.
- 2) The cost of feed is usually the largest cost of animal production system. Therefore **systems, which increase animal production without**

increasing feed costs, are quickly adopted. Examples of these types of system are medicated feeds and confinement housing. Medicated feeds may low dosages of antibiotics included sometimes from birth to slaughter to prevent bacterial infections that are too low to require treatment of an individual animal but still negatively affect feed conversion by the animal. Confinement housing is the system of keeping the animal confined so that feed conversion is not negatively affected by the animal being exposed to heat, cold or having to walk very far for feed and water.

- 3) The use of growth hormones to increase animal productivity. These systems involve the addition of hormones to the feed or injected into the animal that increase the conversion of feed into the production goal. The main ones in use are those used for increasing meat and milk production in cattle.

Organic livestock production rejects use of the above systems. Consequently, the selection of feeds is somewhat more restricted and likely more expensive on a per animal basis. As well the rejection of some of these practices would result in smaller economic units. The rejection of medicated feeds in particular require a higher level of animal health management, therefore one person would be able to raise fewer animals per productive cycle. The effect of not using systems varies based on the particular animal involved.

The following list outlines the major feeds used by conventional and organic livestock producers in each of the four major groups. The third column lists the potential Saskatchewan grown items for each area.

Energy Feeds

<u>Conventional Feeding</u>	<u>Organic Feeding*</u>	<u>Saskatchewan Organic *</u>
Corn	Non-GMO Corn	Barley
Sorghum	Non-GMO Sorghum	Barley
Barley	Barley	Barley
Oats	Oats	Oats
Wheat	Wheat	Wheat
* Grown organically		

Protein Feeds

<u>Conventional Feeding</u>	<u>Organic Feeding*</u>	<u>Saskatchewan Organic *</u>
Soybean	Non-GMO soybeans	Peas, Flax
Soybean meal	Non-GMO soybean meal	Linseed meal

Cottonseed meal
Canola Meal
* Grown Organically

Non-GMO cottonseed meal
Non-GMO canola meal

Linseed meal
Linseed meal

An additional challenge when dealing with protein feeds is the need to balance to amino acids for particular animal production systems. Amino acids are building blocks of protein. Certain animals cannot synthesize enough of particular amino acids, therefore ration balancing will include steps to ensure the protein sources used contain adequate amounts of the required amino acids. Each protein feed has a different amino acid composition.

Non-GMO soybean, Non-GMO soybean meal, Non-GMO cottonseed meal and Non-GMO canola meal are likely only available in the EU because of the large percentage of the rest of the world oilseed crop being grown from GMO varieties. It is not known if any North American crushers are segregating and selling Non-GMO meals at this point. The conventional feeding industry would not be likely to pay a premium for Non-GMO meal.

Fiber Feeds

Because of the low bulk density of dry fiber feeds and problems transporting high moisture fiber feeds, trans continental trade in these items is extremely limited.

Saskatchewan can produce alfalfa and timothy, which is the major items, traded in-group. There appears to be limited demand for organic alfalfa and timothy because of their relatively low value and the ability of most countries with significant organic agriculture to produce large volumes of these crops as part of the normal organic crop rotations.

Supplement Feeds

The major supplement feeds are vitamins and minerals. These feeds are generally used in very small amounts in relation to the previous group. Most of the protein, energy and fiber feeds supply some of the animal requirements for vitamins and minerals. The amounts added to feeds are generally supplied from an approved list that is provided by the organic certifying agency. Additionally many supplements are produced from inorganic materials or from crops not generally grown in Saskatchewan.

There are many feed ingredients in use in conventional animal feeding that are not listed. These are not listed because their use in organic livestock production is not generally accepted due their source, i.e. beef tallow is not used as an energy source in organic production however its replacement would be similar to soybean.

2. GENERAL OVERVIEW - DEMAND

2.1 Factors Driving Demand

Consumer interest in organic foods is high. In general, the growth in the demand for organic food is being driven by the following factors:¹

- Recognition of the relationship between diet and health.
- Changes in household demographics, income, and lifestyle.
- Growing consumer awareness of the environment and agriculture's effect on it.
- Support for sustainable, small-scale agriculture.
- Concerns about animal welfare.
- Concerns about genetically modified organisms (GMOs).
- Concerns about food safety and quality.
- Lower prices and improved availability.
- Greater product choice.
- Greater familiarity with organic food.

The influence of the above factors varies across countries. On a global basis the strongest factors appear to be concerns about food safety and quality, the perception that organic foods are healthier and taste better, and greater environmental awareness.

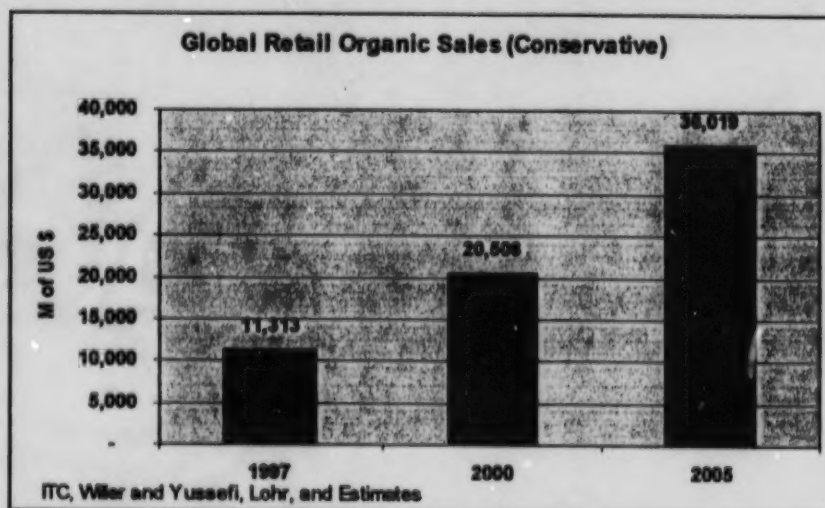
2.2 Market Size and Growth

There are many estimates of the size of the retail market for organic foods. A study by the International Trade Centre pegs retail demand on a global basis at least 10.5 B US\$.² Willer and Yussefi estimate global sales at just under 20 B US\$ in

¹ J. Nordheim, "Organic Food Marketing Trends", Ag Outlook Forum, 1998, Luanne Lohr, "Factors Affecting International Demand and Trade in Organic Food Products, University of Georgia, February 2001, and Sparks, "Organic Foods" Major Opportunity or Perpetual Niche Market?", 1999.

² International Trade Centre, "Organic Food and Beverages: World Supply and Major European Markets", 1999.

2000.³ Supplementing these data sets with data from Lohr increases the estimates for 1997 and 2000 to 11.3 B US\$ and 20.5 B US\$, respectively.⁴ Global retail sales were then forecast for 2005 using conservative estimated growth rates. Based on the analysis, global retail sales could reach 36.1 B US\$ by 2005.⁵ If the high historic rates of growth continue than the global retail market could reach 46 B US\$ by 2005.



The US and Europe are the largest retail markets for organics. In 2000, the European market accounted for 44% (8.5 B US\$) of total global sales while the US accounted for 39% (8 B US\$). The next largest market is Japan with estimated sales of 2.5 B US\$ in 2000.⁶

The following table, compiled from three sources, provides information on market size, market scale and growth in various countries. The numbers presented in this table should not be treated as definitive. The organics industry, especially outside of Europe suffers from a lack of reliable data. Europe has better data because of relatively long term government initiatives to enhance and grow the industry. Once outside of Europe the quality of the data tends to quickly degenerate. The information in the table does show the diversity in the retail marketplace. The fastest growing markets, Taiwan and Australia, are just beginning to develop. In proportion to the total retail food market, the organic market is very small. Only in Denmark, Switzerland, and Austria did the organic market represent more than

³ Helga Willer and Minou Youssefi, "Organic Agriculture Worldwide 2001, Statistics and Future Prospects", IFOAM, 2001.

⁴ Luanne Lohr, "Factors Affecting International Demand and Trade in Organic Food Products, University of Georgia, February 2001.

⁵ Growth in the European market has been slowing. Historical estimates from ITC were reduced by 50%. The US growth rate utilized was 15% rather than the suggested 21%.

⁶ Helga Willer and Minou Youssefi, "Organic Agriculture Worldwide 2001, Statistics and Future Prospects", IFOAM, 2001.

2% of total sales in 1997. There certainly appears room for the market to expand, if the products can be supplied.

Retail Organic Sales by Country, M of US\$

	1997 Sales	% Total Food	Total Food	Annual Growth %	2000 Sales
Germany	1,800	1.2	150,000	10	2,500
Italy	750	0.6	125,000	20	1,100
France	720	0.5	144,000	20-25	1,250
Great Britain	450	0.4	112,500	25-30	900
Switzerland	350	2	17,500	20-30	700
Netherlands	350	1	35,000	15-20	800
Denmark	300	2.5	12,000	30-40	800
Austria	225	2	11,250	15	400
Sweden	110	0.6	10,333	30-40	400
Other Europe	200				500
USA	4,200	1.25	336,000	15-20	8,000
Japan	1,200				2,500
Australia	130			400	170
New Zealand					59
Argentina					20
China	6				12
Taiwan	10			200	10
Philippines					6
Canada	500			15	760
Mexico	12				18
ITC, Willer & Youssefi, and Lohr					

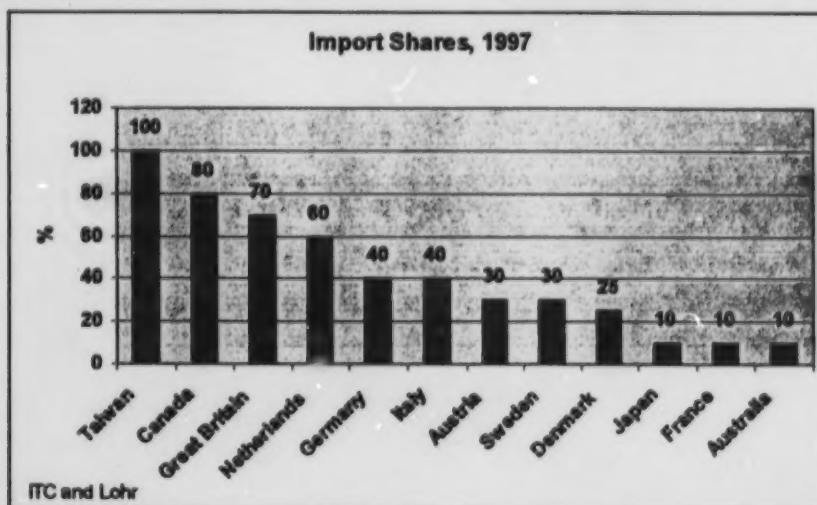
According to Lohr, the organic market in a country generally begins with raw or slightly processed products such as produce, meat, eggs, dairy, spices, and coffee. Domestic producers generally supply these products. In terms of organic supply, comparative advantage in organic production tends to be correlated with comparative advantage in non-organic production. Consequently, Canada, Australia, and the US appear to have a comparative advantage in grain production while most European countries have a comparative advantage in milk and dairy products. As the organic market in a country matures, consumer want organic product that mimics what is available in traditional non-organic product. Hence, as the market matures more processing occurs and trade expands.⁷

2.3 Trade

In order to meet demand, countries may have to import organic product. The following chart shows estimated import shares for 1997. Canada imported 80% of its total requirements for organic products at the retail level. In Europe, Great Britain and the Netherlands imports represent a significant amount of retail sales.

⁷ Luanne Lohr, "Factors Affecting International Demand and Trade in Organic Food Products, University of Georgia, February 2001.

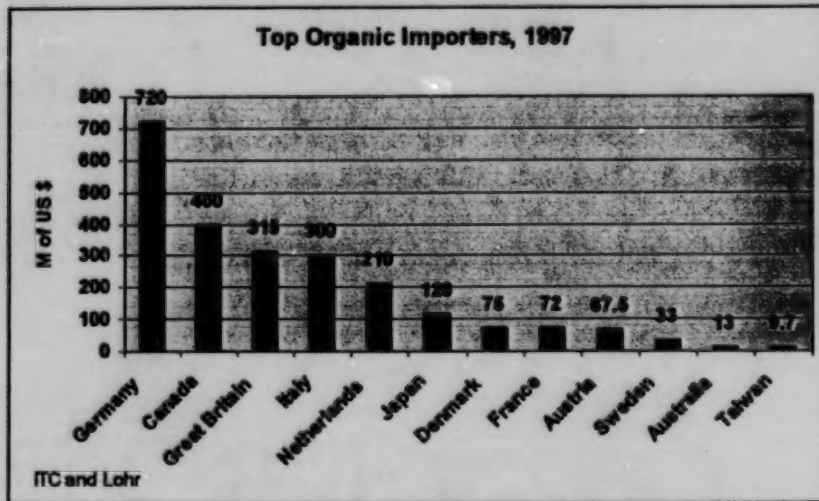
The Netherlands imports organic products and then re-exports it throughout the EU. The proportion of organic acreage in Austria, Denmark, Sweden, and Switzerland far exceeds the EU average of 2%. These countries would perhaps be close to self-sufficiency in staple commodities but because of rapid market growth imports are required. **High import shares tend to be positively related to the level of organic processing.** Germany and Italy have extensive organic food processing sectors. The organic imports by these two countries consist primarily of raw ingredients and semi-processed products.⁸



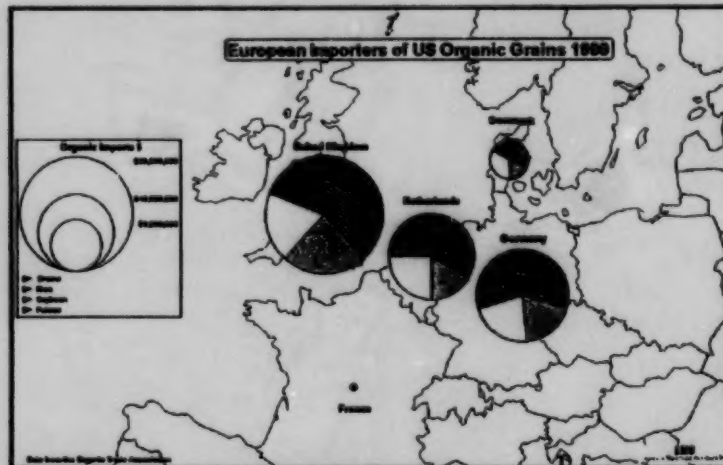
In terms of the size of the import market for organic products, Germany, Canada, Great Britain, Italy, and the Netherlands were the most attractive in 1997. Although markets in Australia and Taiwan are growing the fastest, their small size in terms of value significantly reduces their attractiveness.⁹

⁸ Luanne Lohr, "Factors Affecting International Demand and Trade in Organic Food Products, University of Georgia, February 2001.

⁹ International Trade Centre, "Organic Food and Beverages: World Supply and Major European Markets", 1999 and Luanne Lohr, "Factors Affecting International Demand and Trade in Organic Food Products, University of Georgia, February 2001.



Trade data for organic products is extremely scarce. In 1999 the US exported almost 90 M US\$ of organic product to five countries. Imports of US organic rains by these countries are shown below. In 1999 the UK was the major importer.¹⁰

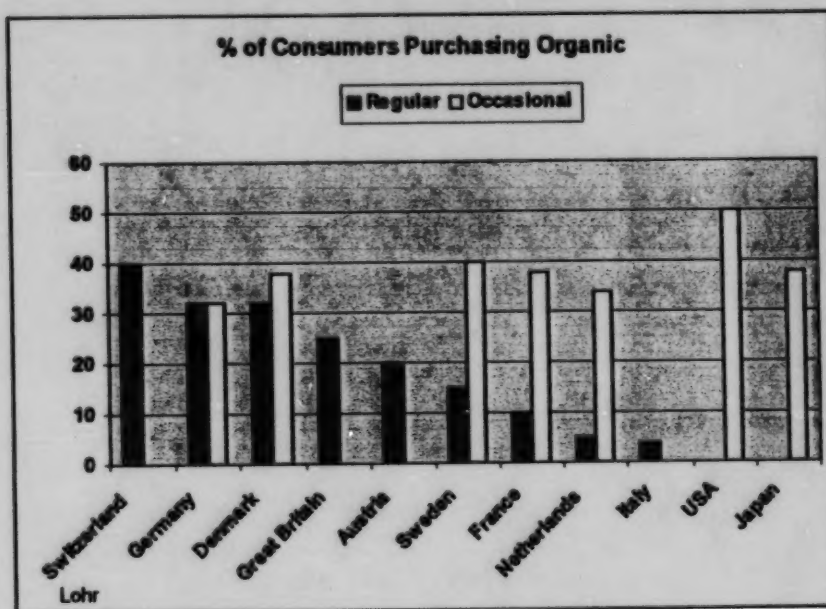


2.4 Market Expansion

Market expansion will depend on increasing both the number of customers and the proportion of each customer's food dollar spent on organics. The following chart provides estimates, where possible, of the proportion of European consumers that purchase organic products regularly and occasionally. Regularly refers to at least once a week while occasionally means once a month or once every six months. Consumers in Switzerland, Germany, and Denmark are the most regular

¹⁰ OTA, Organic Insights, "Export Study", 2000.

organic purchasers. Germany and Denmark also have high proportions of occasional consumers, as do France, Sweden, and Italy. Italy and the Netherlands have the lowest proportion of regular organic consumers. Amongst the European markets, a country with a higher organic share of the retail market tends to have a greater proportion of regular purchasers of organics. For example, the organic market in Switzerland accounts for 2% of the total market. Switzerland also has the highest proportion of regular buyers. It is estimated that between 8% and 19% of US consumers regularly purchase organic product while 50% purchase organic products occasionally. About 38% of Japanese consumers occasionally purchase organic products. In order for market expansion to occur, occasional buyers must become regular buyers. Current non-buyers must also become regular buyers.



Price may be a barrier to increasing the number of regular purchasers. Surveys have found price sensitivity among irregular purchasers.¹¹

- A survey in 2000 of consumers in Switzerland, Germany, and France found that price sensitivity and mistrust of organic labels differentiated occasional and regular buyers. The most sensitive group to price was the non-buyer. Regular purchasers were more concerned about where the food originated and were more knowledgeable about organic production than the other groups.

¹¹ Luanne Lohr, "Factors Affecting International Demand and Trade in Organic Food Products, University of Georgia, February 2001.

- In the US, one survey found that 49% of non-purchasers of organic produce cited price as the reason. Another survey of retailers in Atlanta found that 13% of retailers believed that organic food could not be priced about non-organic food. Another 17% believed that the appropriate price premium for organic food exceeded 20%.

Some consumers will never become purchasers of organic products. In the US, the percentage of consumers that would never purchase organics even with zero premiums has been estimated to be 18% to 35%.¹²

Price differentials for organic foods differ significantly, as the following table shows.

Organic Price Premiums		
	Low %	High %
Switzerland	10	40
Germany	20	50
Denmark	20	30
Great Britain	30	50
Austria	25	30
Sweden	20	40
France	25	35
Netherlands	15	20
Italy	35	100
USA	10	30
Japan	10	20

Luanne Lohr, February 2001

A factor influencing the size of price differentials is the extent to which organic food is distributed through supermarkets. According to the information shown below, Sweden, Austria, and Denmark each have more than 70% of organic sales being made by supermarkets. In the US, specialty stores (such as natural foods supermarkets) dominate the distribution channels. Italy, Germany, and Great Britain have the highest proportion of product moving directly from the producer to the consumer. Supermarkets have lower distribution costs and tend to resist placing large premiums on organic products. Countries with a relatively high proportion of regular buyers tend to have high shares for the supermarket channel. **Widespread distribution is important to the expansion of markets.**¹³

Distribution Channels for Organic Food, Shares

Supermarkets Specialty Store Producer Direct

¹² Luanne Lohr, "Factors Affecting International Demand and Trade in Organic Food Products, University of Georgia, February 2001.

¹³ Luanne Lohr, "Factors Affecting International Demand and Trade in Organic Food Products, University of Georgia, February 2001.

Germany	25	45	20
Italy	25-33	33	33-42
France	45	45	10
Great Britain	65	17.5	17.5
Switzerland	60	30	10
Netherlands	20	75	5
Denmark	70	15	15
Austria	77	13	10
Sweden	90	5	5
USA	31	62	7

Luanne Lohr, February 2001

The size of the price differential also appears to be related to differences in the cost of production for organic products. Organic pork and poultry receives a large premium because of the higher cost of production relative to conventional product. Organic beef is relatively inexpensive to produce because it is raised on organic grass. Poultry and hogs, on the other hand, must be fed costly organic feed.¹⁴

Confusion by consumers about organic labels may limit market expansion. Besides minimum certification labels, products may also bear other accreditation labels. The expansion of "fair trade products" may increase the level of confusion. In the midst of such confusion, consumers may choose the label they are most familiar with. Advertising and international harmonization may reduce this confusion. Consumers may also mistrust "foreign" organic labels. Products have been refused or rejected in certain countries in the EU because they were imported from elsewhere in the EU. Consumers may appear to consider the standards of their country to be stricter than elsewhere and place their trust and dollars accordingly. Some consumers of organic products feel strongly about how and where their food is produced. Products locally produced may be preferred because lower transportation distances reduce the use of fossil fuel and because consumers want to support local producers. In Japan, one researcher found that domestically produced non-organic soybeans commanded a 14% premium over imported organic soybeans. In the US, Japan, and Great Britain consumers support local produce producers through subscription programs.¹⁵

2.5 Food Safety Concerns

Growing concerns about food safety is affecting the demand for organic food. Although the occurrences of food safety lapses are generally isolated, the concern about these events quickly becomes global. BSE and foot and mouth disease outbreaks in Europe received significant publicity worldwide. Genetically modified

¹⁴ DFAIT, "The Organic Foods Market in Germany", March 2000 and International Trade Centre, "Organic Food and Beverages: World Supply and Major European Markets", 1999.

¹⁵ Luanne Lohr, "Factors Affecting International Demand and Trade in Organic Food Products, University of Georgia, February 2001.

organisms (GMOs) are also perceived by some consumers as having negative consequences for food safety.

BSE was first identified in the UK in 1985 and recognized as a disease in 1986. In 1996, the linkage between BSE and Creutzfeldt-Jacob Disease (vCJD) was discovered. By the end of April 2001, 93 people had died from vCJD. ¹⁶ BSE was concentrated in the UK, accounting for 179,000 out of 181,000 cases as of March 2000. In the EU, BSE reached a crisis level in the fall of 2000 with the discovery of more than 100 cases of BSE in 2000 compared to 31 in the previous year and with two deaths from vCJD in France. Consumer concern spread rapidly especially when BSE was found in native-born cattle in Spain and Germany.¹⁷

The BSE crisis negatively affected the demand for beef in the EU. Beef consumption in France fell by 40% to 50%. Cattle prices in France fell by almost 30 Euro/100 kg in three months. Consumers shifted to chicken, turkey, pork, and exotic meat like ostrich, kangaroo, venison, reindeer, horsemeat, and wild boar. Within the UK, the BSE crisis increased the demand for organic meat. Falling consumer confidence lowered sales and profit in Europe for McDonalds, despite a targeted advertising campaign. The crisis also had political casualties including the Agriculture and Health Ministers in Germany.¹⁸

Hard on the heels of the BSE crisis was an outbreak of foot and mouth disease (FMD) in the UK that eventually spread to continental Europe. The highly infectious disease affects sheep, pigs, cattle, deer, goats, horses, rats, and hedgehogs. Its symptoms include salivation, lameness, depression, and anorexia. ¹⁹ The source of the outbreak in the UK was traced to a hog farm that fed the animals leftovers from a restaurant that had been illegally importing meat from China. As of May 6, 2001 there had been 1,560 confirmed outbreaks of FMD in the UK. ²⁰ By mid May almost 3 M animals had been slaughtered and burned in the UK, with about 68,000 animals yet to be destroyed. Outbreaks of FMD also occurred in France, Ireland, and the Netherlands. ²¹

Consumers have also been affected by the FMD outbreak. According to the Meat and Livestock Commission, pictures of burning funeral pyres revived food safety concerns that had originated with BSE. It estimates that more than 1 M

¹⁶ Neville Chandler, "BSE - The Fallout Where Has It Left the Feed and Rendering Industries?", Poultryfirst.com, December 2000 and Meatingplace.com, "Third Variant CJD Victim in France Dead at".

¹⁷ USDA, "International Agricultural Trade Report", December 1, 2000

¹⁸ Just-Food, "BSE Crisis", January 19, 2001 and International Trade Centre, "Organic Food and Beverages: World Supply and Major European Markets", 1999.

¹⁹ Just-Food, "Farming Industry Goes Up in Flames as Foot & Mouth Spreads", March 2001.

²⁰ USDA, "FMD Outbreak Map".

²¹ The Guardian, April 11, 2001 and May 16, 2001.

households may have given up consuming red meat. Meat sales have fallen by 15%.²²



Some consumers are concerned about genetically modified organisms and chose organic food in order to avoid their consumption. Their concerns generally coalesce health concerns, ethical concerns, and the effect on human and environmental health in the long run. They have arisen because of the complexity of biotechnology, the history of food safety issues, the lack of focus on consumers, and the growth anti globalization and anti trade groups.²³

²² Just-Food, "More than 1 M British Families Give Up Red Meat", May 2001. Picture from The Guardian.

²³ Jill Hobs and Marni Plunkett, "GMOs: The Economics of Consumer Food Safety Issues", CAFRI, November 2000.

3. GENERAL OVERVIEW – SUPPLY

3.1 Factors Driving Supply

Organic agriculture is increasing in terms of producer numbers, geographic scope, and land base. Some of the factors responsible for the growth of organic agriculture include regulation, subsidization, market signals, environmental awareness, food safety concerns, and concerns about GMOs. Factors that limit the adoption and expansion of organic agriculture include inconsistent regulation, lengthy conversion periods, lack of appropriate infrastructure (processing plants, abattoirs etc), lack of research and development, lack of technical assistance, and lack of financial support during conversion.

3.2 Global View

A very recent study for IFOAM estimates that currently there are 15.67 M hectares of organic land in the world. As shown below, Oceania accounts for almost 50% of total acreage. Europe has about 24% while Latin America has about 20%. North America with just over 1 M ha represents 7% of global acreage. ¹

Global Distribution of Organic Acres
(as of Feb 2001)

	M hectares	Share
North America	1.1	7.0%
Latin America	3.2	20.4%
Europe	3.7	23.6%
Africa	0.02	0.1%
Asia	0.05	0.3%
Oceania	7.6	48.5%
Total	15.67	
Willer & Yussefi, "Organic Agriculture Worldwide 2001, Statistics and Further Prospects", 2001		

The top 25 organic areas by country are shown below. Australia and Argentina account for almost 70% of total organic area. Italy and the US have organic areas that are approaching the 1 M ha level. Canada is estimated to have about 188,000 ha of organic land.

Top 25 Organic Areas
(as of Feb 2001)

	hectares	% total Org	% in Country
Australia	7,654,924	48.4%	1.62
Argentina	3,000,000	19.0%	1.77
Italy	958,687	6.1%	6.46

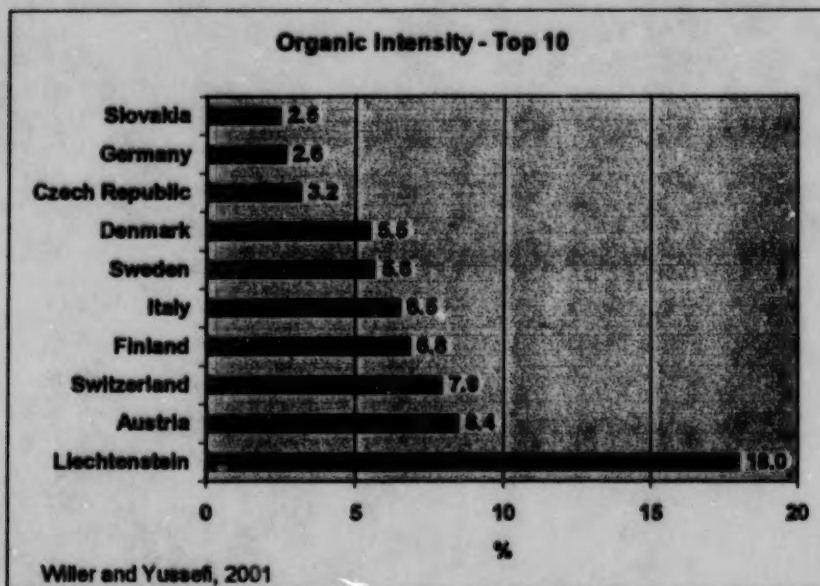
¹ Willer and Yussefi, "Organic Agriculture Worldwide 2001, Statistics and Further Prospects", 2001.

US	900,000	5.7%	0.22
Germany	452,279	2.9%	2.64
UK	380,000	2.4%	2.40
Spain	352,164	2.2%	1.37
France	316,000	2.0%	1.12
Austria	287,900	1.8%	8.43
Canada	188,195	1.2%	0.25
Sweden	174,000	1.1%	5.60
Finland	147,423	0.9%	6.79
Denmark	146,685	0.9%	5.46
Czech Republic	110,756	0.7%	3.15
Brazil	100,000	0.6%	0.04
Mexico	85,676	0.5%	0.08
Switzerland	84,271	0.5%	7.87
Slovakia	60,000	0.4%	2.45
Portugal	47,974	0.3%	1.26
Hungary	34,500	0.2%	0.56
Ireland	32,478	0.2%	0.75
Netherlands	27,820	0.2%	1.39
Greece	21,280	0.1%	0.61
Latvia	20,000	0.1%	0.79
Paraguay	19,218	0.1%	0.08

Willer & Yussefi, "Organic Agriculture Worldwide 2001, Statistics and Further Prospects", 2001

All of the countries in the top ten in terms of organic acreage relative to total acres in the country are in Europe. Liechtenstein leads the world in terms of the conversion of land to organic management. In 2001, 18% of its land was managed organically. Austria and Switzerland each have about 8% of their land farmed organically. Only tiny Liechtenstein is not among the top global 25 in terms of area.²

² Willer and Yussefi, "Organic Agriculture Worldwide 2001, Statistics and Further Prospects", 2001.



3.3 Europe³

Europe has embraced organic farming. The number of organic farms in the 28 countries of Europe has grown from 6,655 in 1985 to 163,032 in 2000. The 15 countries of the EU accounted for 88% of the total farms in 2000.⁴ The EU Accession Countries⁵ accounted for 8% of organic farms while countries in the European Free Trade Association⁶ accounted for 4%. The number of organic farms in the EU grew at a much faster rate in the 1990's (25% CAGR) than in the 1980s (18% CAGR). The EU passed organic legislation in 1991. Conversion to organic farms slowed slightly in the EFTA countries during the 1990's (21% CAGR). During the last decade, the fastest expansion in organic farm numbers occurred in the Accession Countries (40% CAGR).⁷

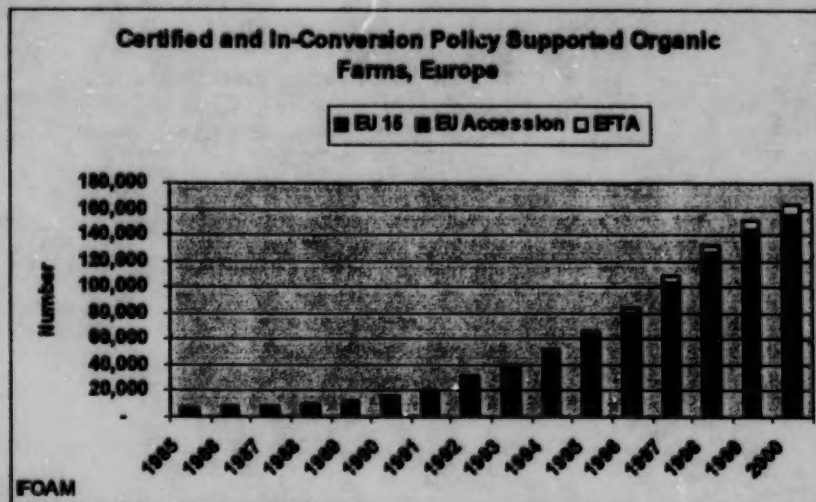
³ The primary data source for the European numbers was Foster and Lampkin. This data and the IFOAM data differ somewhat.

⁴ EU 15: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, and the UK.

⁵ EU Accession: Bulgaria, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia, and Turkey.

⁶ EFTA: Iceland, Liechtenstein, Norway, and Switzerland.

⁷ IFOAM, Foster and Lampkin.

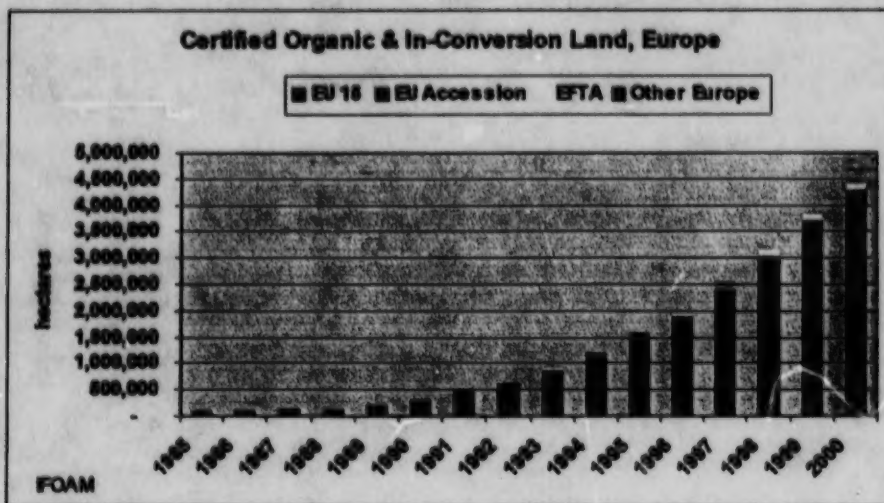


A more explicit geographic distribution of organic farms in Europe and their growth is shown below.^a



The growth in organic acreage in Europe is shown below. In 2000, the 28 European countries had 4.4 M ha of organic and in conversion land compared to 94,000 ha in 1985. The EU 15 accounted for 90% of total organic acres with the Accession Countries accounting for about 7%. As with farm numbers the number of organic land in the EU 15 increased at a faster rate in the last decade (30% CAGR) relative to the 1980's (21% CAGR). During the 1990's organic land in the Accession countries grew at an annual rate of 33%.

^a IFOAM, Foster and Lampkin



The distribution of organic land in Europe from 1996 to 2000 is shown below. Italy, Germany, the UK, Spain, and France have the largest organic land bases.⁹



EU 15	19.6	27.5	40%
Austria		15.0	
Belgium	8.1	41.7	413%
Denmark	22.1	50.0	126%
Finland	10.0	28.2	181%
France	26.7	44.4	67%
Germany	25.1	45.5	81%
Greece	6.0	4.0	-33%
Ireland	25.3	29.2	15%
Italy	8.8	19.8	125%
Luxembourg	60.0	33.3	-44%
Netherlands	18.7	20.0	7%
Portugal	20.0	65.5	228%
Spain	10.4	28.0	168%
Sweden	18.0	20.5	14%
U. Kingdom	44.3	156.3	253%
Based on IFOAM Statistics			

In the Accession Countries, the largest organic farms are in Slovakia (600 ha) and the Czech Republic (294 ha). Organic farm size has grown rapidly in countries such as Latvia, the Czech Republic, Slovenia, and Slovakia. Among the EFTA countries, Iceland has the largest average organic farm size (71 ha).

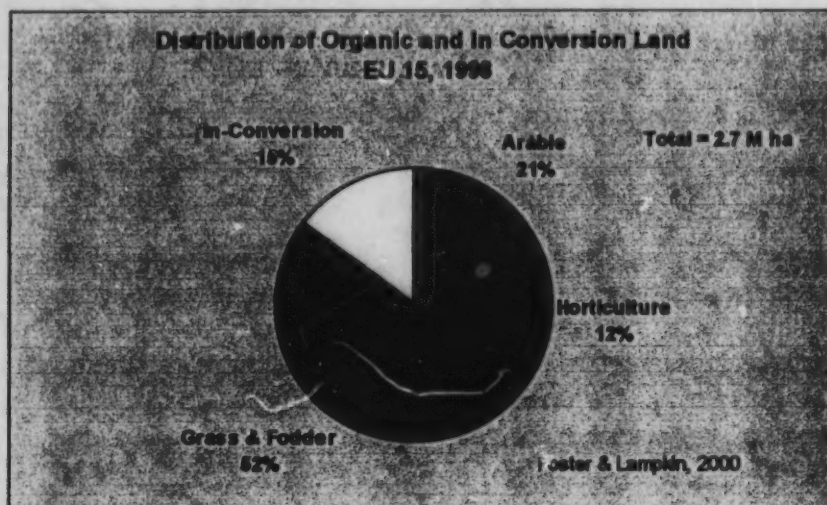
Average Farm Size (ha) - Access & EFTA

	1994	2000	% Change
EU Accession	27.1	26.9	-1%
Bulgaria	0.0	0.0	
Cyprus	0.0	1.0	
Czech Rep	134.9	294.3	118%
Estonia	26.7	48.2	81%
Hungary	107.9	110.9	3%
Latvia	25.0	88.9	256%
Lithuania	19.1	20.5	7%
Malta	0.0	0.0	
Poland	22.2	19.8	-11%
Romania	0.0	10.0	
Slovakia	360.0	600.0	67%
Slovenia	5.0	9.6	92%
Turkey	3.2	2.1	-35%
EFTA	13.7	16.0	17%
Iceland	29.2	71.4	145%
Liechtenstein	29.0	20.9	-28%
Norway	8.2	11.3	37%
Switzerland	15.5	17.3	12%

Based on IFOAM Statistics

3.4 EU

In 1998, the EU 15 had 2.7 M ha of organic and in conversion land. The distribution of organic acreage in the EU for 1998 (last available year) is shown below. There was 1.4 M ha of land in grass and fodder, 565,000 ha in arable crops, and 328,000 ha in horticulture production. The remainder of the land, 407,000 ha was in the process of being converted.¹⁰



Italy, Austria, Germany, and the UK had about 70% of the total organic land in grass and fodder crops in the EU in 1998. During the period 1993 to 1998, this type of organic land use grew very quickly in Italy (25% CAGR), Austria (16%), Germany (16%), and the UK (13%).¹¹

In 1998, there were about 565,000 ha in arable crops in the EU 15. Italy and Germany accounted for 55% of this acreage. These two countries also experienced the fastest growth in arable acres from 1993 to 1998 with CAGR of 32% and 25%, respectively. In 1998, the EU 15 had 137,000 ha of cereals, 11,000 ha of pulse crops, and 9,500 ha of oilseed crops. Denmark, Finland, Sweden and France accounted for almost 90% of organic cereal acres. France had 40% of organic pulse hectares in 1998 while Denmark had 28%. France had 57% of organic oilseed hectares in 1998 while Finland and Sweden had 19% and 11%, respectively.¹²

¹⁰ Foster and Lampkin, "Organic and In-Conversion Land Area, Holding, Livestock and Crop Production in Europe", October 2000.

¹¹ Foster and Lampkin, "Organic and In-Conversion Land Area, Holding, Livestock and Crop Production in Europe", October 2000.

¹² Foster and Lampkin, "Organic and In-Conversion Land Area, Holding, Livestock and Crop Production in Europe", October 2000.

The number of certified organic dairy cows has risen rapidly and reached 279,000 in 1998. Expansion of the organic dairy herd slowed over the 1993 to 1998 period. Organic milk production in 1998 was estimated at 1 M tonnes.¹³ Germany, France, and the UK had the largest shares of organic dairy cows in 1998. However, in terms of organic milk production, Austria, Germany, and Denmark were the major producers accounting for 39%, 30%, and 15%, respectively.

The number of organic cattle in the EU in 1998 was 535,000 compared to only 19,000 in 1993. Again, the rate of expansion slowed over this period. In 1998 the leaders in organic cattle were Austria (47%), Germany (28%), and Denmark (10%). In Austria, organic cattle represented 11% of total cattle. Denmark had the next highest level of intensity at 2.6%.

The number of certified organic hogs in the EU 15 increased from 10,000 head in 1993 to 221,000 in 1998. The evolution of hog numbers and expansion rates are shown below. In 1998, Denmark accounted for 37% of production, while Germany and Austria accounted for 23% and 19% respectively.

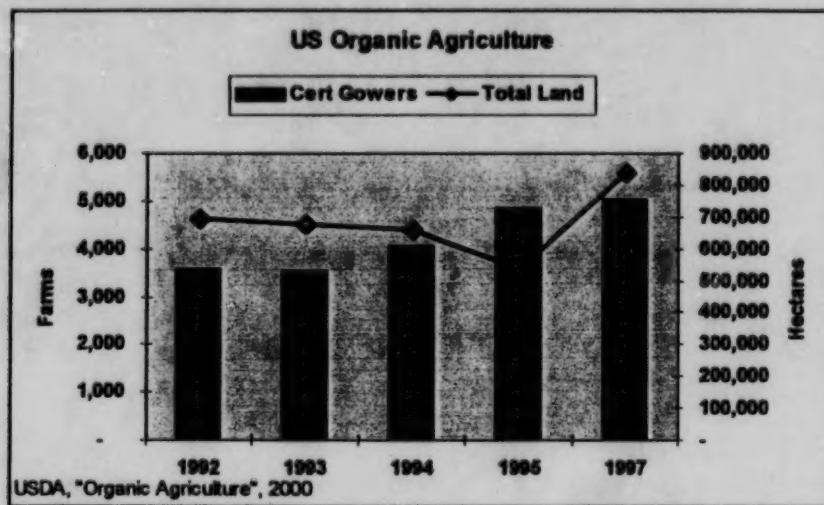
The number of certified organic poultry rose from 62,000 birds in 1993 to 7.3 M in 1998. In 1998, France accounted for 61% of total birds followed by Germany at 13%. Other significant concentrations of organic poultry in 1998 were in Denmark, Austria, and the UK.

3.5 US

Organic agriculture in the US is not as advanced as in Europe.¹⁴ Official estimates by USDA place the number of organic growers at 5,000 and the organic acreage at 0.84 M ha in 1997. Over the 1992 to 1997 period, the number of organic producers grew at 7% per year while the amount of organic land grew at 8%.

¹³ Foster and Lampkin, "Organic and In-Conversion Land Area, Holding, Livestock and Crop Production in Europe", October 2000.

¹⁴ Not only are there fewer organic producers and less organic land, official (or otherwise) data is extremely sketchy. There are also gaps in the USDA data.



The following table shows information regarding organic production in the US in greater detail. According to this data, the average organic farm in the US in 1997 was 108 hectares, a slight increase over 1992. Over the 1992 to 1997 period, acreage of organic cropland increased rapidly while pasture acreage actually fell slightly. The number of hogs, beef cows, and sheep also fell. Organic dairy cows increased in number to 13,000 in 1997 from just over 2,200 in 1992. The number of organic layers increased rapidly and reached over 0.5 M by 1997. The number of organic broilers also increased over the time period. Because the US industry was in such an early stage of development, the trends in the data are very unreliable.

US Certified Organic Production			
	Cert Growers	Cropland Hectares	Pasture
1992	3,587	163,256	532,050
1993	3,536	188,105	490,850
1994	4,060	225,317	434,703
1995	4,856	258,401	279,394
1997	5,021	344,065	496,385
CAGR	7%	16%	-1%
	Beef Cows	Milk Cows	Hogs
1992	6,796	2,265	1,365
1993	9,222	2,846	1,499
1994	3,300	6,100	2,100
1997	4,429	12,897	482
CAGR	-8%	42%	-19%
	Sheep	Layers	Broilers
1992	1,221	43,981	17,382
1993	1,186	20,625	26,331
1994	1,600	47,700	110,500
1997	705	537,826	38,285

CAGR -10% 65% 17%
USDA, "US Organic Agriculture", 2000

4. ORGANIC REGULATION

4.1 Definition of Organic

There are many definitions for organics. For example, it has been defined by the Codex Alimentarius Commission as *"..a holistic production management system which promotes and enhances agroecosystem health, including biodiversity, biological cycles, and soil biological activity...(it) emphasizes the use of management practices in preference to the use of off-farm inputs...(and), where possible, cultural, biological and mechanical methods, as opposed to using synthetic materials.."*¹ Organic livestock production has been defined as *".. part of an organic agroecosystem, aims to fully integrate animal and crop production, bringing forth a symbiotic relationship of recyclable and renewable resources within the farm system. As such, organic producers must take into consideration many factors affecting the overall balance of the system, in addition to the process by which livestock is produced and raised."*²

The Codex Alimentarius Commission also provides guidelines for an organic production system. These are:³

- Enhance system wide biological diversity.
- Increase the soil's biological activity and maintain long-term fertility.
- Recycle plant and animal wastes to minimize the use of non-renewable resources and rely on local renewable resources.
- Promote the healthy use of resource and minimize pollution from agricultural practices.
- Handle and process products to maintain organic integrity and vital qualities.
- Be established on a farm through a period of conversion.

It is the production system that is certified rather than the product.

4.2 Regulation Timeline

A global timeline of organic regulations/events is shown below. During the 1990's the US, the EU, Japan, and Canada put organic regulations or standards in place. The approval of international organic guidelines for the production, processing,

¹ FAS Online, "US and Global Organic Dairy, Livestock and Poultry Production: Implications for International Trade", December 2000.

² FAS Online, "US and Global Organic Dairy, Livestock and Poultry Production: Implications for International Trade", December 2000.

³ EC Commission, "Organic Farming, Guide to Community Rules", 2000.

labeling, and marketing of organic food by the Codex Alimentarius was a major step forward in the eventual development of harmonized regulations.⁴ The lack of harmonized standards hinders international trade and reduces consumer confidence in imported product.

Organic Timeline	
1973: first organization to certify farmers in NA is founded, Calif Certified Organic Farmers	1983: Austria introduces guidelines for organic farming
1984: OTA is established	1988: Washington state introduces organic standards and certification
1990: US passes Organic Food Production Act	1991: EU adopts organic regulations
1992: Japan introduces voluntary organic labeling guidelines	1997: US introduces draft National Organic Program
1988: Iowa enacts legislation to certify organic production, handling, and processors	1999: USDA allows some meat and poultry products to be labeled organic
1999: Minnesota introduces organic regulation and cost-shares certification	1999: USDA begins voluntary, ISO-65 program for certifiers
1999: UK provides assistance for conversion, research, and information	1999: Codex Alimentarius approves international guidelines for the production, processing, labeling, and marketing of organic food
1999: Canada introduces voluntary organic standards	1999: Japan starts developing national standards for production
2000: USDA releases second version of National Organic Program	
USDA, FAS Online, "Timeline of Organic Milestones", 2000.	

4.3 EU Regulation

The EU has regulated organic production, processing, labeling and marketing of organic crop products since 1992. In August 2000, regulations came into effect for organic livestock (enacted in 1999). The EU standards are the minimum requirements that must be met. In areas where EU regulations do not exist, each member country's competent authority can set its own standards. The competent authorities also approve private certification bodies. These bodies can impose higher standards if desired.

⁴ USDA, FAS, "Organic Perspectives", September 1999 and Codex Alimentarius Commission, "Guidelines for the Production, Processing, Labeling and Marketing of Organically Produced Foods", 1999

The pertinent parts of the EU's regulations regarding organic animal feed are reprinted below. Note the flexibility in the regulations regarding the organic content of feed until 2005 contained in section 4.8.

4.1. Feed is intended to ensure quality production rather than maximising production, while meeting the nutritional requirements of the livestock at various stages of their development. Fattening practices are authorised in so far as they are reversible at any stage of the rearing process. Force-feeding is forbidden.

4.2. Livestock must be fed on organically produced feedingstuffs.

4.3. Furthermore, livestock must be reared in accordance with the rules set out in this Annex, preferably using feed from the unit or, when this is not possible, using feed from other units or enterprises subject to the provisions of this Regulation.

4.4. Up to 30 % of the feed formula of rations on average may comprise in-conversion feedingstuffs. When the in-conversion feedingstuffs come from a unit of the own holding, this percentage can be increased to 60 %.

4.5. The feeding of young mammals must be based on natural milk, preferably maternal milk. All mammals must be fed on natural milk for a minimum period, depending on the species concerned, which shall be three months for bovines (including bubalus and bison species) and equidae, 45 days for sheep and goats and 40 days for pigs.

4.6. Where relevant, Member States shall designate areas or regions where transhumance (including movements of animals to grazing areas in mountains) is practicable, without prejudice to the provisions on the feeding of livestock laid down in this Annex.

4.7. Rearing systems for herbivores are to be based on maximum use of pasturage according to the availability of pastures in the different periods of the year. At least 60 % of the dry matter in daily rations is to consist of roughage, fresh or dried fodder, or silage. Nevertheless, the inspection authority or body can permit a reduction to 50 % for animals in dairy production for a maximum period of three months in early lactation.

4.8. By way of a derogation from paragraph 4.2, for a transitional period expiring on 24 August 2005, the use of a limited proportion of conventional feedingstuffs is authorised where the farmer is unable to obtain feed exclusively from organic production. The maximum percentage of conventional feedingstuffs authorised per year is 10 % in the case of herbivores and 20 % for other species. These figures shall be calculated annually as a percentage of the dry matter of feedingstuffs from agricultural origin. The maximum percentage authorised of conventional feedingstuffs in the daily ration, except during the transhumance period, must be 25 %, calculated as a percentage of the dry matter.

4.9. By derogation from paragraph 4.8, when forage production is lost, in particular as a result of exceptional weather conditions, the competent authorities of the Member States can authorise for a limited period and in relation to a specific area, a higher percentage of conventional feedingstuffs

where such a derogation is warranted. Upon approval by the competent authority, the inspection authority or body shall apply this derogation to individual operators.

4.10. For poultry, the feed formula used in the fattening stage must contain at least 65 % cereals.

4.11. Roughage, fresh or dried fodder, or silage must be added to the daily ration for pigs and poultry.

4.12. Only products listed in Annex II, Part D, sections 1.5 and 3.1 can be used as additives and processing aids, respectively, in silage.

4.13. Conventional feed materials of agricultural origin can be used for animal feeding only if listed in Annex II, Part C, section 1 (feed materials from plant origin), subject to the quantitative restrictions imposed in this Annex, and only if they are produced or prepared without the use of chemical solvents.

4.14. Feed materials from animal origin (whether conventional or organically produced) can only be used if listed in Annex II, Part C, section 2, and subject to the quantitative restrictions imposed in this Annex.

4.15. No later than 24 August 2003, Part C, sections 1, 2, 3 and Part D of Annex II will be reviewed with the aim of removing, in particular, conventional feed materials of agricultural origin produced organically in sufficient quantity in the Community.

4.16. In order to satisfy nutritional requirements of livestock, only products listed in Annex II, Part C, section 3 (feed materials from mineral origin), and part D, sections 1.1 (trace elements) and 1.2 (vitamins, pro-vitamins and chemically well-defined substances having a similar effect), can be used for animal feeding.

4.17. Only products listed in Annex II, Part D, sections 1.3 (enzymes), 1.4 (microorganisms), 1.6 (binders, anti-caking agents and coagulants), 2 (certain products used in animal nutrition) and 3 (processing aids in feedingstuffs) can be used in animal feeding for the purposes indicated in respect to the above mentioned categories. Antibiotics, coccidiostatics, medicinal substances, growth promoters or any other substance intended to stimulate growth or production shall not be used in animal feeding.

4.18. Feedingstuffs, feed materials, compound feedingstuffs feed additives, processing aids for feedingstuffs and certain products used in animal nutrition must not have been produced with the use of genetically modified organisms or products derived therefrom."

Products imported from countries recognized as having equivalent standards and inspections systems (Argentina, Australia, Hungary, Israel, Switzerland, and the Czech Republic) are treated as if they were produced in a member country. The competent authority in the importing country must authorize imports from other countries. The importing business must be registered with an organic inspection body.⁵

⁵ British House of Commons, "Report on Organic Farming", January 26, 2001.

Until 2005, member states can issue import permits from "third countries" like the US and Canada. The importer must prove that the products have been grown and processed equivalent to EU regulation and that inspection processes were equivalent (ISO 65).⁶

Exporters must package organic products according to EU regulations. Only product with more than 95% of organic agricultural ingredients can be labeled as organic. Products with between 70% and 95% of organic agricultural ingredients are labeled partly organic. Information required on the label includes certifying body stamp, EU accredited registration number, product/brand name, name and address of producer/distributor, country of origin, use by date, weight, and ingredient listing.⁷

4.4 EU Subsidization

The expansion of organic land holding increased dramatically after the implementation of the EC organic regulations for crop production and the introduction of subsidies to assist in conversion (implemented in 1993). Nearly 80% of organic land came in after these regulations were implemented. The wide level of support for organic farming in the EU has occurred because the goals of organic farming and agricultural policy goals have become aligned. Both recognize the importance of the environment, animal welfare, sustainability, food quality, financial viability, and social justice. Organic farming as compared to conventional agricultural policy addresses all of the above goals, has global recognition, and uses the market as a means of support. The EU implemented agri-environmental measures in 1993 with full implementation by 1996. Organic farming receives about 11% of the agr-environmental budget. The organic industry has also received government assistance through funding for marketing, processing, technical assistance to farmers, training, and research. ⁸ Financial support provided to organic farmers in the EU is shown below.

	Average Financial Assistance Across the EU, CDN\$/Ha						
	Data Year	Arable	Improved Grassland	Unimproved Grassland	Horticulture	Permanent	Years Paid
UK	2000	206	160	23	160	206	5
Austria	2000	467	318	89	621	1,138	5
Belgium	1998	310	512	509	514	1,442	2
Denmark	1999	276	276	276	276	276	2
Finland	1998	480	566	-	775	1,535	1-3
France	2000	259	346	151	259	435	2-3
Germany	1999	238	238	238	238	826	5
Greece	2000	337	337	337	337	914	5

⁶ EC Commission, "Organic Farming, Guide to Community Rules", 2000.

⁷ USDA, FAS GAIN Report, "UK Organic Food Product Brief", 2000

⁸ Nicolas Lampkin, "Public Support for the Development of Organic Farming in Europe".

Ireland	2000	259	259	259	346	346	2
Italy	1996	330	552	552	552	1,542	2
Luxembourg	1999	274	274	274	-	-	5
Netherlands	1999	391	226	226	1,951	3,902	5
Portugal	1998	403	403	403	465	807	2-3
Spain	1996	224	200	149	573	473	2
Sweden	1998	308	308	308	308	1,385	5

British House of Commons, "Report on Organic Farming, January 2001

Agenda 2000 that covers the 2000 to 2006 period has some implications for organic production. Support prices for beef and cereals will fall and be only partially replaced by direct payments. Rural development, environmental, and structural policies are now separate but will become integrated. Organic farming will benefit from this revision.⁹

4.5 US Regulation

In the US, the **Organic Foods Production Act** was enacted in 1990. Its purpose was to protect consumers, facilitate interstate commerce, and establish national standards for marketing organic products. This act required that all but the smallest growers become certified by either a private certification agency or a state. **Organic crops, eggs, and dairy** could be labeled as organic throughout the 1990's. It was not until 1999, however, that organic meat and poultry could be labeled as such.

The **National List** was created in 1990. It contains allowable and prohibited substances for organic food production and is reviewed annually.¹⁰ Prohibited substances on the National List include almost all synthetic animal drugs and hormones, as well as plastic pellets, formulas containing urea or manure or additives containing animal by-products. If preventive practices and biologic medicines do not work, the animal must be treated with conventional measures and then sold as non-organic.¹¹

The **National Organic Program (NOP)** was developed over a long period and will be fully implemented by October 2002.¹² The National Organic Program standards include:¹³

- Certification of all organic growers and handlers (handlers does not include brokers, warehouses, or transportation) is required. Growers with less than \$5,000 annually in sales are exempt from certification.

⁹ Nicolas Lampkin, "Public Support for the Development of Organic Farming in Europe".

¹⁰ DFAIT, "The Natural/Organic Food Market in the United States", 2000.

¹¹ FAS Online, "US and Global Organic Dairy, Livestock and Poultry Production: Implications for International Trade", December 2000.

¹² FAS Online, "US and Global Organic Dairy, Livestock and Poultry Production: Implications for International Trade", December 2000

¹³ DFAIT, "The Natural/Organic Food Market in the United States", 2000.

- ❑ Records must be kept for five years of all management practices and materials used in organic production.
- ❑ Producers and handlers must keep separate records of conventional and organic production.
- ❑ The land used for organic crops must have been free of banned substances for a minimum of three years prior to harvest. Organic producers must maintain an acceptable buffer zone for fertilizer and chemical drift.
- ❑ Organic livestock must be fed organic feed and be kept in good housing conditions with periodic access to the outdoors and sunlight.
- ❑ Medications, feed and processing activities must comply with the National List.

In the US, **split production** farms with both conventional and organic varieties are allowed but the production of the same type of crop on both is not allowed.¹⁴ The standards for **livestock production** require that organic livestock be under continuous organic management from birth or hatchings. Exceptions are made for poultry (2nd day of life), milk (for one year), non-edible products such as wool (one year prior to harvest), and breeding stock (non-organic mothers must be managed organically prior to the last third of pregnancy).¹⁵

The rules also prohibit the use of genetically engineered material, ionizing radiation, and sewage sludge.

The criteria for organic food labeling under the NOP are:¹⁶

- ❑ 100% organic: products must contain (excluding water and salt) 100% organic produced raw or processed agricultural product
- ❑ Organic: Products must contain not less than 95% organically produced raw or processed agricultural product. The 5% non-organic ingredients must consist of no-agricultural substances or be on the list of allowed substances.
- ❑ Made with Organic: These products must contain at least 70% organically agricultural products.

¹⁴ Minnesota Department of Agriculture, "The Status of Organic Agriculture in Minnesota", April 2001.

¹⁵ FAS Online, "US and Global Organic Dairy, Livestock and Poultry Production: Implications for International Trade", December 2000.

¹⁶ DFAIT, "The Natural/Organic Food Market in the United States", 2000.

- Organic ingredients: Products with less than 70% organic ingredients may use the word "organic" only in the list of ingredients.

Products meeting these requirements may use USDA's organic seal. Imported product that meets the NOP standards may be labeled "organically produced".¹⁷

The USDA reviews certification programs under which imported organic products are produced under NOP standards. Certifiers in foreign countries can apply for US accreditation or receive recognition through equivalency agreements between the US and foreign government or through US recognition that foreign government authority is able to assess and accredit agent as meeting NOP standards. Currently one Canadian certification body has applied for recognition.

The following sections of the National Organic Program with relevancy for livestock feed are shown below:

"205.237 Livestock feed.

(a) The producer of an organic livestock operation must provide livestock with a total feed ration composed of agricultural products, including pasture and forage, that are organically produced and, if applicable, organically handled: Except, That, nonsynthetic substances and synthetic substances allowed under § 205.603 may be used as feed additives and supplements.

(b) The producer of an organic operation must not:

(1) Use animal drugs, including hormones, to promote growth;

(2) Provide feed supplements or additives in amounts above those needed for adequate nutrition and health maintenance for the species at its specific stage of life;

(3) Feed plastic pellets for roughage;

(4) Feed formulas containing urea or manure;

(5) Feed mammalian or poultry slaughter by-products to mammals or poultry; or

(6) Use feed, feed additives, and feed supplements in violation of the Federal Food, Drug, and Cosmetic Act.

205.290 Temporary variances.

¹⁷ DFAIT, "The Natural/Organic Food Market in the United States", 2000.

(a) Temporary variances from the requirements in §§ 205.203 through 205.207, 205.236 through 205.239, and 205.270 through 205.272 may be established by the Administrator for the following reasons:

(1) Natural disasters declared by the Secretary;

(2) Damage caused by drought, wind, flood, excessive moisture, hail, tornado, earthquake, fire, or other business interruption; and

(3) Practices used for the purpose of conducting research or trials of techniques, varieties, or ingredients used in organic production or handling.

(b) A State organic program's governing State official or certifying agent may recommend in writing to the Administrator that a temporary variance from a standard set forth in subpart C of this part for organic production or handling operations be established: Provided, That, such variance is based on one or more of the reasons listed in paragraph (a) of this section.

(c) The Administrator will provide written notification to certifying agents upon establishment of a temporary variance applicable to the certifying agent's certified production or handling operations and specify the period of time it shall remain in effect, subject to extension as the Administrator deems necessary.

(d) A certifying agent, upon notification from the Administrator of the establishment of a temporary variance, must notify each production or handling operation it certifies to which the temporary variance applies.

(e) Temporary variances will not be granted for any practice, material, or procedure prohibited under § 205.105.

205.301 Product composition.

e) Livestock feed:

(1) A raw or processed livestock feed product sold, labeled, or represented as "100 percent organic" must contain (by weight or fluid volume, excluding water and salt) not less than 100 percent organically produced raw or processed agricultural product.

(2) A raw or processed livestock feed product sold, labeled, or represented as "organic" must be produced in conformance with § 205.237.

(f) All products labeled as "100 percent organic" or "organic" and all ingredients identified as "organic" in the ingredient statement of any product must not:

- (1) Be produced using excluded methods, pursuant to § 201.105(e);
- (2) Be produced using sewage sludge, pursuant to § 201.105(f);
- (3) Be processed using ionizing radiation, pursuant to § 201.105(g);
- (4) Be processed using processing aids not approved on the National List of Allowed and Prohibited Substances in subpart G of this part: Except, That, products labeled as "100 percent organic," if processed, must be processed using organically produced processing aids;
- (5) Contain sulfites, nitrates, or nitrites added during the production or handling process, Except, That, wine containing added sulfites may be labeled "made with organic grapes";
- (6) Be produced using nonorganic ingredients when organic ingredients are available; or
- (7) Include organic and nonorganic forms of the same ingredient.

205.306 Labeling of livestock feed.

(a) Livestock feed products described in § 205.301(e)(1) and (e)(2) may display on any package panel the following terms:

- (1) The statement, "100 percent organic" or "organic," as applicable, to modify the name of the feed product;
- (2) The USDA seal;
- (3) The seal, logo, or other identifying mark of the certifying agent which certified the production or handling operation producing the raw or processed organic ingredients used in the finished product, Provided, That, such seals or marks are not displayed more prominently than the USDA seal;
- (4) The word, "organic," or an asterisk or other reference mark which is defined on the package to identify ingredients that are organically produced. Water or salt included as ingredients cannot be identified as organic.

(b) Livestock feed products described in § 205.301(e)(1) and (e)(2) must:

- (i) On the information panel, below the information identifying the handler or distributor of the product and preceded by the statement, "Certified organic by...", or similar phrase, display the name of the certifying agent that certified the handler of the finished product. The business address, Internet

address, or telephone number of the certifying agent may be included in such label.

(ii) Comply with other Federal agency or State feed labeling requirements as applicable. "

The US national standards do not provide as much flexibility as the EU in terms of the percentage of organic feed fed animals. Temporary variances are allowed only in the case of natural disasters or other significant weather disturbances, fires or business interruptions.

The National Organic Standard Board's Livestock Committee is currently discussing feed additives, the role of pasture in ruminant production, and allowing up to 5% of feed to come from non-organic natural products. The adoption of a 5% level of non-organic natural products would allow organic animal feed to contain fishmeal and fish oil.¹⁸

The US federal government does not subsidize the conversion of conventional farms to organic farms. Some states such as Minnesota do provide a small amount of financial assistance.

¹⁸ NOSB Livestock Committee Conference Call, April 27, 2001.

5. TARGET MARKET – UK

5.1 Development

The organic movement began in the 1930's. However, the early adopters were generally thought of as eccentrics. The movement began to be respected after the publication of "The Living Soil" by Lady Balfour. The movement also gained more credibility with the establishment of the Soil Association in the late 1940's.¹

The government **subsidizes the conversion** of land to organic production. Payments, however, are 50% of what producers in other countries receive. A free advisory service to farmers and growers was introduced in 1996.² The UK does not heavily subsidize organic production relative to other EU countries. For example, the UK provides \$206 per ha per year for arable crops while Austria provides \$467/ha per year.³

In order to increase domestic supplies, supermarkets like Sainsbury's are providing **producers financial assistance to convert to organic production**. Sainsbury's provide \$0.71/litre for five years to help dairy producers convert. The company also has implemented a plan to transform all the land in Grenada and St Lucia to organic. This will provide Sainsbury's with a supply of organic tropical fruit. **Eastbrook Farms Organic Meat and a division of Associated British Nutrition have joint ventured to produce organic hogs.** ⁴

5.2 Regulation

The Soil Association introduced organic standards into the UK in 1974. These standards along with those of IFOAM and of France eventually formed the basis for the EU regulations in 1991.⁵

The UK's competent authority is UKROFS. Its focus has evolved over time and it now primarily ensures that the certifying bodies correctly interpret and implement EU regulations. In the UK, **eight certification bodies** are recognized. The well-known bodies are the Scottish Organic Producers Association, Biodynamic Agricultural Association, Organic Farmers & Growers, Organic Food Federation, and the Soil Association. Other certifying bodies include the Irish Organic Farmers and Growers Association, Food Certification (Scottish organic salmon), and the Organic Trust. **The Soil Association standards cover 70% of all organic food in the**

¹ Organic Europe, "Organic Farming in the United Kingdom".

² International Trade Centre, "Organic Food and Beverages: World Supply and Major European Markets", 1999.

³ British House of Commons, "Report on Organic Farming", January 26, 2001.

⁴ DFAIT, "The Organic Products Market in the UK", 2000.

⁵ International Trade Centre, "Organic Food and Beverages: World Supply and Major European Markets", 1999.

UK. The UKROFA also acts as a certifying body for enterprises (15 in number) that want certification to the minimum EU standards.⁶

Each of the nine certification bodies has its own logo. The large number of certifiers may have confused consumers. While the certification and verification processes for importing and processing may have worked quite well for a small industry, the dynamic growth has caused delays etc throughout the supply chain.⁷

Concern has been raised in the UK that the standards are **"non-scientific, arbitrary and illogical"** and that ideology is outweighing practicality. Another concern is that the UK bodies are **"gold-plating"** their standards such as mandating longer conversion periods and more rigid bans on natural pesticide. Excess standards would make UK products less competitive, discourage investment, and reduce the credibility of imported products. Most experts believe, however, that UK standards are in the middle range of EU standards.⁸

After the EU adopted regulations on organic livestock, the UK revised their standards. Highlights of the UK regulations enacted August 24, 2000 are:⁹

- Housing. Up to 50% of the floor may now be slatted up from 25%. Specific densities are provided in the act.
- Feed: Until 2005, small quantities of non-organic feed may be fed to organic livestock. **Ruminants can consume up to 10% non-organic feed. Poultry and hogs can consume up to 20% non-organic feed and can receive up to 25% for short time periods.**
- Simultaneous conversion: Livestock and land can be simultaneously converted to organic. The land conversion processes usually takes two years. Now organic stock can be sold two years after the start of conversion. If the livestock can be managed organically from the beginning of the organic process, then calves born three months after the beginning of the process can be sold as organic as soon as the land is converted.
- Manure: The total amount of nitrogen cannot exceed 170 kg/ha of land used for manure spreading.
- Parallel production: Physical, operational, and financial separations must be put in place between organic and non-organic holdings.

⁶ British House of Commons, "Report on Organic Farming", January 26, 2001.

⁷ British House of Commons, "Report on Organic Farming", January 26, 2001.

⁸ British House of Commons, "Report on Organic Farming", January 26, 2001.

⁹ Just-food, "New Standards for Organic Livestock Production", November 2000.

- Poultry: Land used for organic poultry production can become organic after a one year conversion process.

Until 2005 UK importers may be authorized by UKROS to import products from countries like the US provided the products were produced according to EU regulation, were subject to inspection of equivalent effectiveness, and certified by bodies complying with EU regulations or ISO 65. The importer must also provide a statement from foreign certifier that the products are **not genetically modified or produced from GMOs.**¹⁰

5.3 Market Size and Growth

The retail market for organic food in the UK has been growing rapidly, 25% to 30% annually. In 2000 retail sales were 900 M US\$ compared to 450 M US\$ in 1997.¹¹

Will this rapid growth continue? How will the sector evolve? Here are some diverse opinions on these issues:

- British House of Commons: **"Organic farming is now a mature sector. Some of its apostles still proselytes with an almost religious fervour and, occasionally, a sectarian spirit. This helps nobody. The past perhaps belonged to messianics; the future belongs to marketing."**¹²
- Soil Science Association: The organic market increased by 55% in 1999-2000. This indicates that organic food and farming have become a popular alternative to industrialized agriculture. However, supermarket price wars have reduced price premiums, the dilution of organic standards, and more imports threaten the integrity of organic production.¹³
- Datamonitor: The market research company believes that the UK organic market will grow faster than any other market in Europe or the US and reach 4.2 B US\$ by 2005. The rapid growth will be driven by concerns about **GMO's, food safety scares like BSE, and general awareness in healthy food.** By 2005, the per capita consumption of organic foods in the UK is forecast to reach almost 70 US\$ compared to 42 US\$ across Europe. **Organics will remain a niche, however.** Consumers do not want conversion to 100% organic products.¹⁴

¹⁰ USDA, FAS GAIN Report, "UK Organic Food Product Brief", 2000

¹¹ Helga Willer and Minou Yussefi, "Organic Agriculture Worldwide 2001, Statistics and Future Prospects", IFOAM, 2001.

¹² British House of Commons, "Report on Organic Farming", January 26. 2001.

¹³ Soil Association, "Summary of the Organic Food and Farming Report", 2000.

¹⁴ Just-Food, "Organic Foods -No Full-Scale Conversion", May 2001.

There are some structural, policy, and infrastructure problems that must be corrected. These include:¹⁵

- Limited funding and bureaucracies limit conversion
- Infrastructure gaps: shortage of abattoirs, animal feed, and processing capacity.
- Limited training, research (production and consumption), education, and marketing.

5.4 Products

The breakdown of retail sales in 1999 shows the dominance of organic fresh produce. Milk and yogurt account for most of the dairy category sales. Sales of these products have increased three fold from 1993 to 1997 because of the very low price differential between conventional and organic product. Meat has seen the most benefit from the BSE disaster. The price differential for organic beef and lamb is about 25% or less because organic and conventional costs of production are similar. Pork and poultry require imported feed, which results in price premiums that may hit 100%. About 95% of beef is domestically produced. A University of Wales study suggests that the UK organic poultry sector is much less developed because consumers can't differentiate between free-range and organic chicken.¹⁶

UK Organic Retail Sales, 1999	
	M of US \$
Fresh Produce	263
Multi-Ingredients	87
Dairy	81
Cereals and Bakery	75
Beverages	27
Meat	21
Baby Foods	18
Eggs	14
OTA, "Export Study"	

The current supply chain is very inefficient and has no economies of scale. As the industry grows, supply chain costs will fall. Some experts such as Dr Lampkin believe producer prices will remain strong for organic production because expanded production will only replace imports rather than increase total supply.

¹⁵ British House of Commons, "Report on Organic Farming", January 26, 2001.

¹⁶ OTA, Organic Insights, "Export Study", 2000.

However, report suggests that it is likely prices will erode and producer should plan for that.¹⁷

Organic production in the UK is increasing and the rate of growth is accelerating. In 2000, the UK had 11,000 organic farms with 500,000 ha. The average size of organic farms is increasing, even after removing the effect of the conversion of very large Scottish farms. The farm value of organic output was 81 M US\$ in 1999.¹⁸ The majority of organic and in-conversion land in Scotland is in extensive livestock production. Livestock operations also predominate in Wales.¹⁹

In 1999, 79% of fully organic ha were in grassland (permanent pasture, temporary leys, and rough grazing). Most of the 180,000 ha in conversion are in grass because during conversion soil fertility must be increased. In 1999, only 13,000 ha were in crops (arable, horticulture and fruit). According to one study, *"Whilst the area of organic crop production has grown significantly it is not increasing as fast as the area of grassland. The apparent reluctance of arable farmers to convert, combined with the large increases in organic livestock production, will further increase reliance on imported organic cereals."*²⁰

The production and value of organic grain in the UK in 1998 is shown below. Wheat and barley had the highest prices.²¹

UK Organic Grain Production, 1998

	Production Tonnes	Farm Value US\$/tonne
Milling Wheat	9,000	332
Feed Wheat	9,000	314
Milling Oats	16,000	N.A.
Feed Oats	6,500	250
Food Barley	800	290
Feed Barley	3,000	304
Triticale	1,400	285
Rye	600	277
Beans	1,400	296
Peas	200	249

Robyn Cross, "Export Potential for Organic Stockfeed and Organic Meat to the EU", July, 2000

¹⁷ British House of Commons, "Report on Organic Farming", January 26, 2001.

¹⁸ British House of Commons, "Report on Organic Farming", January 26, 2001.

¹⁹ Organic Europe, "Organic Farming in the UK".

²⁰ Organic Europe, "Organic Farming in the UK".

²¹ Robyn Cross, "The Export Potential for Organic Stockfeed and Organic Meat to the EU and Mechanisms for the Development of the Organic Industry", July 2000.

The majority of the organic grain produced in the UK is utilized in the production of human food. As the following chart indicates the total value of organic grain production was about 20 B US\$ in 1998/99. Human use represented the majority of value following by prepared feed, on-farm use, and off-farm sales.²²

**Distribution of UK Organic Grain
Value, 1998/99**

	M of US\$	Share
On Farm Use	2.2	11%
Sold Off Farm	1.3	7%
Prepared Feed	3.0	15%
Human Use	13.4	67%
Total	19.8	

Robyn Cross, "Export Potential for
Organic Stockfeed and
Organic Meat to the EU", July 2000

Arable crop production is growing much slower than other types of production, just 19% from 1997/98 to 1998/99. The slower growth is because of the difficulty in conversion and a lack of interest. The slow growth in the availability of organic cereal impacts the development of the organic livestock sector.²³ The lack of supply is responsible for the large amount of organic imports, estimated at 60% to 70% of total sales. About 50% of the food is imported from other EU countries. Other importers include the US, Egypt, Israel, Argentina, South Africa, and Central America.²⁴

A significant amount of domestic cereal production is used as animal feed. Producers sell it to farmers who make their own feed or to feed mills. Sales of organic wheat and soybeans for feed for organic free range laying hens is a very significant growth area. The demand for organic poultry feed is also growing because of interest in organic poultry by supermarket chains. The price premium on organic feed has typically exceeded 80% and in 1999 was 150%.²⁵ The following table shows the range of prices for organic prepared feed and organic grains and oilseeds in 2000.

UK Organic Prices, 2000

	Range, US\$/Tonne	
Broiler Ration	420	436

²² Robyn Cross, "The Export Potential for Organic Stockfeed and Organic Meat to the EU and Mechanisms for the Development of the Organic Industry", July 2000.

²³ British House of Commons, "Report on Organic Farming", January 26, 2001.

²⁴ International Trade Centre, "Organic Food and Beverages: World Supply and Major European Markets", 1999.

²⁵ International Trade Centre, "Organic Food and Beverages: World Supply and Major European Markets", 1999.

Layer	405	483
Beef Finisher	234	467
Pig Grower	420	467
Milling Wheat	311	
Feed Wheat	280	
Peas/Beans	311	
Soybean	623	
Robyn Cross, "Export Potential for Organic Stockfeed and Organic Meat to the EU", July 2000		

The composition of organic prepared feed by species is shown below. Although this table is based on the practices of one company, it is likely to be very representative of the industry.²⁶

Composition of Organic Prepared Feed in the UK

(Single Company)	Poultry	Layer	Beef	Pig
		Mash	Finisher	Grower
Org Wheat	X	X	X	X
Org Wheat Feed	X		X	X
Palm Kernel Expeller			X	
Linseed Expeller			X	
Prairie Meal	X	X		X
Full Fat Soya	X	X		X
Org Beans	X	X	X	X
Alfalfa Meal	X		X	X
Sugar beet Pulp			X	
Molasses			X	
Sodium Bicarbonate	X	X		X
Calcium Carbonate	X	X	X	X
Di-Calcium Phosphate	X	X		X
Salt	X	X	X	X
Methionine	X	X		X
Lysine	X	X		X
Vitamins	X	X		X
Calcined Magnesite			X	
Robyn Cross, "Export Potential for Organic Stockfeed and Organic Meat to the EU", July 2000				

Organic milk requirements are expected to reach 200 M liters annually by 2004 compared to the current 80 M litres. Only 50% of organic milk is currently supplied domestically. By 2004 even with growth, domestic producers can only

²⁶ Robyn Cross, "The Export Potential for Organic Stockfeed and Organic Meat to the EU and Mechanisms for the Development of the Organic Industry", July 2000.

account for 30% of demand. Imports are currently from Denmark. Organic milk and cheese is priced at a premium while yogurt is not.²⁷

The organic dairy sector has been successful in part because producers, retailers, and processors have worked together. The Organic Milk Suppliers Cooperative negotiates contracts with retail stores and processors on the behalf of milk producers.²⁸

Organic meat production is shown below. Significant increases occurred in most meat livestock production from 1997/98 to 1998/99. The Meat and Livestock Commission forecast that the number of organic beef cattle will increase by 300% and that hogs and sheep would increase by 500% by 2001. Despite these large anticipated increases, organic livestock would still account for less than 1% of total livestock production. The Commission also felt that it would be unlikely that organic livestock production would represent 5% by 2010. The lengthy conversion period, high cost of production, and the shortage of organic animal feed will limit expansion.²⁹ The supply of organic meat will also be negatively affected if new hygiene regulations result in a decrease in the number of slaughterhouses from 340 to 75.³⁰

UK Organic Meat Production				
	1998/99			
	Head	Farm Value M of US\$	Ch Head From 97/98 Forecast	2001
Beef	4,200	4.1	24%	12,600
Lamb	26,000	2.3	13%	130,000
Pork	12,000	3.0	71%	60,000
Table Poultry	190,000	2.0	52%	
Total		11.3		
British House of Commons, "Report on Organic Farming", January 2001				

Eastbrook Farms, an organic hog producer, believes that it will be exporting significant quantities by 2005. The organic meat industry is not quite self-sufficient. Meat is being imported from South America (beef) and pork (Scandinavia and Northern Europe). One retailer, ASDA, can only source 7 head per week of organic beef in the UK while it could sell 140 head per week in the near future.³¹

FMD may prove to be the last straw for some farmers in the UK. A recent survey found that less than 50% of respondents were confident that their business would

²⁷ DFAIT, "The Organic Products Market in the UK", 2000.

²⁸ British House of Commons, "Report on Organic Farming", January 26, 2001.

²⁹ British House of Commons, "Report on Organic Farming", January 26, 2001.

³⁰ DFAIT, "The Organic Products Market in the UK", 2000.

³¹ British House of Commons, "Report on Organic Farming", January 26, 2001.

recover. About 36% were planning to only partially re-stock their livestock herds and 6% were planning to leave farming.³²

In the UK organic poultry is very undeveloped relative to other sectors. In 1996 only 50 enterprises had organic poultry with only 10 operations of any size. Organic egg production was 0.5 M dozen eggs and 85,000 table birds.³³ Organic egg production doubled between 1997/98 and 1998/99. In 1998/99 about 75 M organic eggs were produced. They had a farm gate value of about 10 M US \$.³⁴

Some of the organic poultry industry's key issues or challenges are:³⁵

- Suitability of breeds for organic table birds
- Sourcing of organic pullets – needed in the future
- Concern over synthetic amino acids and fish meal in food
- Animal health problems like pecking, cannibalism, coccidiosis and parasites
- Lack of large slaughtering facilities increases costs

Organic table birds are distributed through specialty stores while eggs are through supermarkets. Organic egg and bird production has better gross margins than free range or conventional production. This occurs because of premiums of 50% over free range. Most producers are of insufficient scale to be profitable. Expansion of organic poultry production will occur on units producing 1,000 table birds per week or with 5,000 layers.³⁶

5.5 Supply Chain

Supermarkets dominate organic food sales with a market share of 65%. The remainder of sales is evenly split between specialty stores and producer direct schemes.

In April of 1999 there were 800 businesses licensed to produce organic food with 2,464 establishments. There were 34 organic animal feed processors. The value of the processing sector is \$440 M lbs annually. Fruits and vegetables represented over 33%. Small companies dominate processing and manufacturing of organic food. Recently, large companies such as Unilever, Kraft, Del Monte, and Gerber have launched organic foods.³⁷

³² Just-Food, "British Farming Set to Change in Wake of FMD", April 2001.

³³ Nicolas Lampkin editor, "Organic Poultry Production".

³⁴ British House of Commons, "Report on Organic Farming", January 26, 2001.

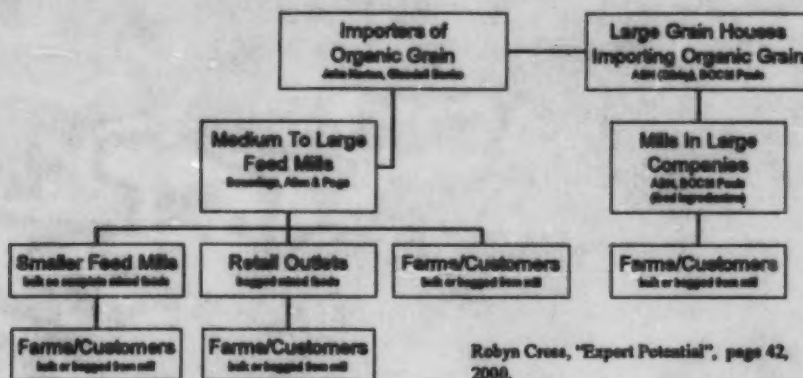
³⁵ Nicolas Lampkin editor, "Organic Poultry Production".

³⁶ Nicolas Lampkin editor, "Organic Poultry Production".

³⁷ OTA, Organic Insights, "Export Study", 2000.

A schematic of the distribution system for organic compound feed is shown below.²⁸

Distribution System for Organic Compound Feed in the UK



Either specialist trading companies or large grain companies' source imported organic grain. The specialty importers service medium to large feed mills who in turn supply prepared feeds to smaller feed mills, retail outlets, and direct to farm customers. The large grain companies' mills provide prepared organic feed directly to producers. The prepared feed reaches producers in bulk or bagged form.

Major importers of organic feed grain in the UK are:

Gleadell Banks:²⁹

- ❑ Major importer of organic grain. Operates throughout Europe.
- ❑ Jointly owned by Sidney Banks, A.C. Toefer, and Sigma. ADB owns 50% of A.C. Toefer.
- ❑ Imports 60% of organic requirements from EU and 40% from outside EU.
- ❑ Product sourced from outside EU is primarily organic protein. Imports organic and non-GMO soybean from Canada and milling wheat and pulses from Australia.

²⁸ Robyn Cross, "The Export Potential for Organic Stockfeed and Organic Meat to the EU and Mechanisms for the Development of the Organic Industry", July 2000.

²⁹ Robyn Cross, "The Export Potential for Organic Stockfeed and Organic Meat to the EU and Mechanisms for the Development of the Organic Industry", July 2000.

- ❑ Small size customers require small volumes on a monthly basis.

John Norton Grain Marketing:⁴⁰

- ❑ Imports organic grain into UK.
- ❑ Customers are small and require small volumes on a monthly basis.
- ❑ Sources between 70% and 80% of its organic grain requirements within Europe.

Major producers of organic prepared feed include:

Associated British Nutrition (ABN):⁴¹

- ❑ The second largest animal feed producer in the UK.
- ❑ Owned by Associated British Foods, which in turn is owned by Wittington Investments.
- ❑ The largest animal feed subsidiary is J. Bibby Agriculture.
- ❑ Produces about 12,000 tonnes of organic prepared feed annually out of a total compound feed production of 1.5 M tonnes.
- ❑ Produces organic feed at two mills.
- ❑ The majority of the prepared feed is delivered bulk to the customer. Some is bagged and sold through retail outlets.

BOCM Pauls:⁴²

- ❑ The largest prepared feed producer in the UK.
- ❑ A privately owned company formed in 1992 from the merger of Pauls Agriculture and BOCM Silcock (owned by Unilever).
- ❑ Produces about 3,000 tonnes of organic prepared feed in three mills. Total feed production is 1.2 M tonnes.

⁴⁰ Robyn Cross, "The Export Potential for Organic Stockfeed and Organic Meat to the EU and Mechanisms for the Development of the Organic Industry", July 2000.

⁴¹ Robyn Cross, "The Export Potential for Organic Stockfeed and Organic Meat to the EU and Mechanisms for the Development of the Organic Industry", July 2000, and Corporate Watch, "ABN", October 1999.

⁴² Robyn Cross, "The Export Potential for Organic Stockfeed and Organic Meat to the EU and Mechanisms for the Development of the Organic Industry", July 2000, and BCM Pauls.

- ❑ Produces organic prepared feed for ruminants.
- ❑ Organic feed is sold bulk from the mills and in bags through agents' outlets.
- ❑ Organic feed products and their composition is shown below.

BOCM Pauls' Organic Ruminant Feed

Approved Feeds Containing Organic Ingredients

Product Name	Class of Stock	Protein (%)	Organic (%)	In-Conversion (%)	Total Organic & In-Conversion
Natural Elite	D,B,Y,E	18	80	Nil	80 Organic
Natural Gold	D,B,Y,E	18	20	60	80
Natural Red	D,B,Y,E	18	10	40	50
Natural Platinum	D,B,Y,E	24	25	37	62
Natural Silver Meal	D,B,Y,E	23	20	42	62
Natural Green	D,B,Y,E	15	5	45	50
Natural Blue Pellets	C,L,R	16	10	40	50
Natural 18	D,B,Y,E	18	Nil	Nil	Nil
Natural 25	D,B,Y,E	25	Nil	Nil	Nil
Natural 14	D,B,Y,E	14	Nil	Nil	Nil

D=Dairy, B=Beef, Y=Youngstock, E=Ewes, L=Lambs, R=Rams
Source: BCOM Pauls

Bowerings:⁴³

- ❑ With one mill, produces about 6,000 tonnes of prepared organic feed per year. Total feed output is 18,000 tonnes annually.
- ❑ Prepared pig and poultry feeds represents 60% of organic feed production.
- ❑ Organic feed margin is five to six times more than conventional feed margin.

⁴³ Robyn Cross, "The Export Potential for Organic Stockfeed and Organic Meat to the EU and Mechanisms for the Development of the Organic Industry", July 2000.

- 75% of output is delivered in bulk form to customers with the remaining 25% bagged and branded and sold to small mills and a retail merchant.

Allen & Page:⁴⁴

- Produces about 3,000 tonnes of organic prepared feed out of production of 30,000 tonnes.
- Although does sell some bulk to very large customers, the majority of organic feed is bagged and sold through their retail outlets.
- Believes that the market for organic feed is growing rapidly.
- The ingredients used in its organic feeds are:
 - Organic: wheat, barley, wheatfeed pellets, peas, sunflower, Lucerne pellets
 - Non-Organic: non GM soya, non GM full fat soya, non GM corn, molasses, Lucerne, wheat feed, rapeseed/bean blend, linseed, salt, calcined magnesite, calcium carbonate, di-calcium phosphate, seaweed, yeast, wheat germ, natural vitamin sources
- The oil, protein, and fibre composition of its feeds are shown below:

Allen & Page's Organic Feed			
	Oil	Protein	Fibre
<u>Poultry</u>			
Baby Chick Crumbs	4%	18%	5%
Grower Finisher Pellets	3%	15%	5%
Layers Pellets/Meal	4%	16%	7%
<u>Pig</u>			
Sow and Weaner	3.50%	15%	8%
Pig Grower/Finisher	4%	16%	7%
<u>Cattle</u>			
Dairy	4%	16%	13%
Cattle Finisher	3.25%	14%	12%
Allenandpage.com			

The wholesale organic food market was valued at about 125 M US\$ in 1998/99, a 20% increase from the previous year. The sales of further processed multi-ingredient products like baby foods are not included.⁴⁵

⁴⁴ Robyn Cross, "The Export Potential for Organic Stockfeed and Organic Meat to the EU and Mechanisms for the Development of the Organic Industry", July 2000.

⁴⁵ Organic Europe, "Organic Farming in the UK".

Some experts believe that supermarkets now account for almost 70% of organic food sales. Their participation in organics began in 1981 and accelerated during the 1990's. Supermarkets now are treated equally with producers and industry.⁴⁶ The retail chains most committed to organic food appear to be Tesco, Sainsbury's, Safeway, Asda, Waitrose and Iceland.⁴⁷

According to Tesco, 25% of its customers now buy organic food every week. The largest factor is parents' concern over the welfare of their children. Tesco is funding a chair in Organic Ecology at Newcastle University. It also has an agreement with Duchy Originals (owned by the Prince of Wales) for organic bread and biscuits. Tesco and Iceland are both funding efforts to reduce the price of organic food.⁴⁸ As previously mentioned, Sainsbury's is funding dairy farms to convert to organic.

5.6 Opportunities and Barriers for Exporters

More imported cereals are required. About 50% of the human food requirements are met by imports. With the growth in organic livestock production and the slow growth in arable organic acres, the need for imported feed is expected to increase in the future.⁴⁹

A survey by the Australian government regarding the possibility of the four mentioned UK firms (ABN, BOCM Pauls, Bowerings, and Allen & Page) purchasing organic prepared feed from Australia found that:⁵⁰

"None of these businesses would considering (sp) importing complete animal feeds. The main reasons for this are a) from their perspective the margins are not adequate, b) apart from the high protein products, other organic products can be sourced within the EU, c) the current regulation, which allows 20% non-organic material, is structured to account for the current production capabilities and until these regulations change there is no need to source outside and d) philosophically they feel that organic feeds should be produced, where possible, close of the point of consumption."

The tariff on prepared feed can be prohibitive. The EU tariff on prepared feed ranges from 29 CDN\$/tonne to 1,211 CDN\$/tonne. The low tariff value is for prepared feed with greater than 15.5% protein by weight. The high value is for prepared feed with greater than 75% milk products by weight.

⁴⁶ OTA, Organic Insights, "Export Study", 2000.

⁴⁷ FAS Online.

⁴⁸ Just-food, "Organic Sales Predicted to Quadruple", Sept 2000.

⁴⁹ Organic Europe, "Organic Farming in the UK".

⁵⁰ Robyn Cross, "The Export Potential for Organic Stockfeed and Organic Meat to the EU and Mechanisms for the Development of the Organic Industry", July 2000.

The philosophy of organics is focused on consumption and production occurring in close proximity whenever possible. Because environmental quality is generally important to industry participants, attempts are made to minimize "food miles". Imports are acceptable only when the product cannot be sourced locally. There is also a preference ordering for imports with imports from other European countries preferred to imports from further afar.

The EU and UK organic livestock regulations recognize the difficulty of sourcing enough organic feed grain to feed organic livestock 100% organic feed. The regulations also reflect the preference towards local production. The flexibility of the feeding requirements in the EU legislation are shown below (emphasis added):

"4.8. By way of a derogation from paragraph 4.2, for a transitional period expiring on 24 August 2005, the use of a limited proportion of conventional feedingstuffs is authorised where the farmer is unable to obtain feed exclusively from organic production. The maximum percentage of conventional feedingstuffs authorised per year is 10 % in the case of herbivores and 20 % for other species. These figures shall be calculated annually as a percentage of the dry matter of feedingstuffs from agricultural origin. The maximum percentage authorised of conventional feedingstuffs in the daily ration, except during the transhumance period, must be 25 %, calculated as a percentage of the dry matter.

4.9. By derogation from paragraph 4.8, when forage production is lost, in particular as a result of exceptional weather conditions, the competent authorities of the Member States can authorise for a limited period and in relation to a specific area, a higher percentage of conventional feedingstuffs where such a derogation is warranted. Upon approval by the competent authority, the inspection authority or body shall apply this derogation to individual operators"

As the organic prepared feed list from BOCM Pauls shows, mills produce to the minimum standards. The importation of 100% organic prepared feed would not make business sense. The market only has to pay for 80% to 90% organic feed.

The Australian study also indicated that except for protein sources, Europe has a sufficient supply of organic feed grain overall. The regulations specify that the protein (even during conversion) must be non-GMO. Non-GMO soybean is generally imported.

Other market entry concerns include:

- There have been complaints about delays in clearing imports and registering farms. Understaffing at the UKROS contributes to delays.⁵¹

⁵¹ British House of Commons, "Report on Organic Farming", January 26, 2001.

- DFAIT encourages Canadian exporters to retain the services of a distributor/wholesaler.⁵²
- **Exporters should be careful about what certifying body they use for their organic certification.** Generally organizations recognized by IFOAM have more credibility in the UK. UKROFS should be consulted about the acceptance of certification bodies.⁵³ According to DFAIT, *"It should be noted that only those products certified according to an organic standard recognized by the EU are eligible for export to the EU member states. This will certainly affect the number of producers currently certified, who are also eligible to export to the UK. However, the development of the National Standard of Canada for Organic Agriculture should help Canadian producers gain access to European markets, once the standard is recognized as meeting EU requirements."*⁵⁴
- It is expected that the UK will continue to import large amounts of organic product as demand increases. **One notable substitute for organic production is integrated crop management systems that use less chemicals and fertilizers and more natural pest control techniques.** One of the major supermarket chains has actively encouraged ICM. By 1996 about 45% of imported and 80% of domestic fruits and vegetables were produced under ICM. Organic produce may have to compete with ICM produce. Also, the promotion of ICM over organics by supermarkets may limit the growth of the organic market. GM foods benefiting consumers (ie functional foods and nutraceuticals) also pose a threat to organics.⁵⁵

Other products that may provide export opportunities are produce, breakfast cereals, and packaged items such as sauces, salad dressings, beverages, candy and snacks, and frozen foods. **The level of competition in processed products is increasing** as conventional food manufactures begin organic manufacturing. However, the lengthy conversion period and small numbers will ensure that imports continue in the future.⁵⁶

5.7 Buyer List

The following list of organic feed mills and organic grain buyers in the UK was developed from various information sources:

⁵² DFAIT, "The Organic Products Market in the UK", 2000.

⁵³ USDA, FAS GAIN Report, "UK Organic Food Product Brief", 2000

⁵⁴ DFAIT, "The Organic Products Market in the UK", 2000.

⁵⁵ International Trade Centre, "Organic Food and Beverages: World Supply and Major European Markets", 1999.

⁵⁶ USDA, FAS GAIN Report, "UK Organic Food Product Brief", 2000

		UK Buyers List			SWINE CATTLE SHEEP GOAT			
	Phone	Fax	E-Mail					
Harley Foods	Importer	44-1900-828276						
Bowerings Animal Feeds	Feed 01278 458191				x	x	x	x
Batchley Mill	Feed				x	x	x	x
Hi-Park Feeds	Feed 01332 342224				x	x	x	x
Batchley Mill	Feed				x	x	x	x
Duke & Botley Agr	Feed					x		
Batchley Mill	Feed				x	x	x	x
Vitillon	Feed 01777 228741				x	x	x	x
Community Foods	Imports 44-181-450-9411	44-181-208-1551						
Allen & Page	Feed 01362 822902		allenandpage@dist.piper.com		x	x	x	x
Allen & Page	Feed 01362 822902		allenandpage@dist.piper.com		x	x	x	x
Vitillon	Feed 01777 228741				x	x	x	x
Vitillon	Feed 01777 228741				x	x	x	x
Allen & Page	Feed 01362 822902		allenandpage@dist.piper.com		x	x	x	x
Bowerings Animal Feeds	Feed 01278 458191				x	x	x	x
Duke & Botley Agr	Feed					x		
Bowerings Animal Feeds	Feed 01278 458191				x	x	x	x
Allen & Page	Feed 01362 822902		allenandpage@dist.piper.com		x	x	x	x
Dove Farm Foods	Imports 44-1488-684800	44-1488-635235						
Organic Feed Co	Feed 01362 822902		allenandpage@dist.piper.com		x			
Merriges	Feed 01245 354455				x			
ABN	Feed							

6. TARGET MARKET – DENMARK

6.1 Development

Organic production began in the 1970's. The Organic Agricultural School, established in the 1980's, provides education for organic farmers. The Centre for Organic Agriculture was founded in 1998. Early organic producers formed cooperatives to process and distribute their products. Many of these cooperatives went bankrupt. In 1990 all organic milk producers merged into a single cooperative that is now closed.¹

The most current data indicates that Denmark has 147,000 organic ha and about 3,500 organic farms². Producers were initially reluctant to convert but now are doing so because of market forces and government support.

Denmark has very strict agriculture and environmental policy. For instance, no farm can have more than 500 animal units. Farms with more than 250 animal units must have an environmental plan. Also, during the winter, 65% of cultivated land must be covered by crops to minimize fertilizer leaching.³

In 1995 and 1999, the Government created strategies to increase organic production in Denmark. The 1999 plan has an explicit goal to put "Denmark in the forefront of the development, production, and sales of organic food.". The Government wants 10% of arable land to be in organic production by 2004. The goal is reasonable as by the end of 2000, 7% of land is organic. ⁴ Support by the government towards the organic sector has been significant, about \$500 M annually. Organic farming received 58% of the total green grants. In the UK, organic farming received only 7% of grants. Support is provided for production research, promotion as environmental tool, increasing number and quality of organic foods, export development, protection and extension of O brand, and subsidy programs. Denmark also discourages conventional farming by high taxes on insecticides and pesticides.⁵

6.2 Regulation

Organic agriculture in Denmark has been regulated since 1987 via Danish and then EU legislation. The production of organic meat, milk, eggs and honey are now covered by EU regulation. The Danish authorities must approve farms prior to them selling their production as organic. The Danish Veterinary and Food Administration inspect and approve organic processors, importers, and packers.

¹ Organic Europe, "Organic Agriculture in Denmark", 2000.

² IFOAM and Helga Willer and Minou Youssefi, "Organic Agriculture Worldwide 2001, Statistics and Future Prospects", IFOAM, 2001.

³ OTA, Organic Insights, "Export Study", 2000.

⁴ OTA, Organic Insights, "Export Study", 2000.

⁵ DFAIT, "The Organic Food Market in Denmark", 2000.

Strict regulations regarding additives and non-organic ingredients exist for processed food. Denmark has a logo that identifies that an approved company has carried out the preparation and packing of organic food. The permits and certificates of imported raw material used in the product are checked. **Generally, only food prepared in Denmark can use the state organic logo.** This creates an incentive to import bulk goods for processing and repackaging. One organic regulation in Denmark is stricter than the EU regulations. Individual farms must completely convert to organic. Conventional and organic production on one farm is not allowed.⁶

There are two certification agencies: Danish Association for Organic Agriculture and the Biodynamic Association. (OTA)

The relevant Danish regulations for organic animal feed and processed feed are shown below.

"Section 14. Unprocessed feedstuffs produced in an organic area may be labelled and sold as organic feed.

Subs. 2. Unprocessed feedstuffs from areas where the provisions in Appendix 2 on organic plant production have been followed for at least a year prior to sowing of the relevant crop, and for perennial crops at least a year prior to harvesting, may be sold as "conversion feed for animals on authorized farms". Such feed shall be deemed 100% organic where feeding has taken place on the holder's own farm and 50 percent organic if done on another holding, cf. Appendix 3, Part A, no. 7.

Section 15. Complete diet mixes may be labelled and sold as "x% organic", where "x" designates the size of the organic energy content as a percentage if at least 75 percent and from January 2000 at least 80 percent of the energy content originates from vegetable raw materials produced in an organic area. Correspondingly, supplementary feed mixes can be labelled and sold as "x% organic" if at least 50 percent of the energy content originates from vegetable raw materials grown in an organic area.

Subs. 2. The organic origin of raw materials in feed mixes must be stated for each individual raw material and together with an indication of the organic raw materials' total proportion of the total energy content must be clearly stated separate from the labelling stipulated in the Executive Order on feedstuffs.

Section 16. Substances and products mentioned in Appendix 3, part A, nos. 3 and 4, may not be used to produce organic feed.

Subs. 2. Feedstuffs treated with ionizing radiation may not be used to manufacture organic feed."

⁶ International Trade Centre, "Organic Food and Beverages: World Supply and Major European Markets", 1999.

The regulations show both the bias towards local production of organic feed and the flexibility in feeding requirements.

6.3 Market Size and Growth

In 2000, the retail market for organic food in Denmark was 600 M US\$ compared to 350 M US\$ in 1997.⁷ During the late 1990's the market grew by 30% to 40% each year. Future growth is expected to slow to about 20% per year because of very slow expected growth in the dominant dairy sector. Some believe that the sector is entering the mature phase while others believe that rapid growth will occur again soon. The latter is unlikely to occur. Growth will have to come through the launch of new products or product variations because the number of future new customers will be very small.⁸

Although the market will grow at a more normal rate, it will still expand because of the following:⁹

- Environmental awareness and nutritional awareness is increasing
- Advertising and competitive pricing is being used by major retailers to drive consumption.
- Producers and processors find the organic market attractive.
- The government is supportive of the industry.

6.4 Products

The 1999 market share for organic products in Denmark is shown below. Milk and whole meal flour both have shares exceeding 20%. Pork and beef have very small shares.¹⁰

Market Share for Organic Food Denmark, 1999	
Milk	22
Whole meal Flour	22
Oat Grains	18
Eggs	13
Carrots	11
Wheat Flour	11
Curdled Milk	8

⁷ Helga Willer and Minou Youssefi, "Organic Agriculture Worldwide 2001, Statistics and Future Prospects", IFOAM, 2001.

⁸ Infood, "The Danish Market for Organic Food, 1995 to 2005", 2000.

⁹ International Trade Centre, "Organic Food and Beverages: World Supply and Major European Markets", 1999.

¹⁰ Organic Europe, "Organic Agriculture in Denmark", 2000.

Potatoes	7
Onions	4
Butter	3
Cheese	2
Beef	2
Pork	1
Organic Europe	

A large portion of organic land is used for fodder crops like grass and cereals because over 85% of organic farms have livestock. At the farm level, dairy accounts for 65% of the total value followed by vegetables (20%) and eggs (10%).¹¹

About 21,000 tons of organic cereals were produced in 1996. Wheat, barley, rye, and oats are produced. The amount used in animal feeds is unknown. **Skjern A Andel and DLG Okologi produce organic feed. Significant amounts of organic cereals are imported.** In 1996 7,300 tons of cereals were imported with wheat accounting for more than 50%. Major exporters to Denmark are Germany, the UK, and France. Barley is used to produce organic beer. The others are generally used in breakfast cereals. In 1996 6,400 tons of cereal were imported for use as animal feeds compared to 1,900 tons in 1996. Other animal feeds like soybean products are also imported. These imports have increased from 100 tons in 1992 to 4,100 tons in 1996.¹²

The most important agricultural sector is dairy. Organic dairy production has increased from 800,000 liters in 1986 to 320 M liters in 1999. A large part of the growth is due to MD Food, Klover, and OkoMoelk (dairy cooperative). MD Food processes about 80% of all organic milk in Denmark and organic milk sales represent 21% of total milk sales in 2000.¹³ The two biggest suppliers of organic milk recently merged (MD Foods and Klover Maelk).¹⁴ (ITC)

Currently, Denmark exports 80% of its organic milk production. About 12% is consumed domestically as table milk and the rest is processed. **While consumption of organic milk is growing by 10% per year, consumption is growing at 3%.** Organic table milk represents 25% of domestic fluid milk consumption. Since 1990 organic milk producers have had incomes double that of conventional milk producers because of government support and higher prices.¹⁵

It is possible to have too much of a good thing. *"With the increasing production of organic milk and as the Danish market is saturated, the Arla Foods are looking for*

¹¹ OTA, Organic Insights, "Export Study", 2000.

¹² International Trade Centre, "Organic Food and Beverages: World Supply and Major European Markets", 1999.

¹³ OTA, Organic Insights, "Export Study", 2000.

¹⁴ International Trade Centre, "Organic Food and Beverages: World Supply and Major European Markets", 1999.

¹⁵ USDA, "Organic Perspectives", November 2000



export markets for organic dairy products. Marketing studies reveal that organic demand is fast increasing in Germany and UK and Danish dairies have decided to exploit these marketing opportunities. A major campaign for the UK market will be launched later this year." ¹⁶

Arlo, the world's largest supplier of organic dairy products, and OkoMaelk have decided that they will require their producers to use 100% organic feed rather than the lower level allowed by law.¹⁷

Danish consumption of organic meat is 6,000 tonnes and is generally supplied by domestic producers.¹⁸

The production and consumption of organic beef is very small. Less than 0.5% of beef slaughtered is organic. Production of organic beef is increasing – from 100 tons in 1992 to 800 tons in 1997. The meat may be sold fresh or processed into sausages etc. About 15,000 to 20,000 organic cattle were slaughtered in 1999. The main beef suppliers are Hanegal Okologisk Kod A/S and Friland Food A/S. Organic beef imports are insignificant.¹⁹

Production and consumption of organic pork is also very small. The supply of organic pork rose from 100 tons in 1992 to about 350 tons in 1996. A lack of supply has held back consumption. The number of organic pigs slaughtered in 1998 was between 20,000 and 25,000. Organic slaughter was expected to reach 50,000 in 1999. Pork is sold fresh, frozen, and in chacuterie. Imports are minimal.²⁰ Other more recent information suggests that the majority of organic pork production is exported because of low domestic demand for the product. The production of organic pigs is reported to be growing by 40% each year driven by a 50% price premium.²¹

Organic egg production has grown quickly and represented 8% of total organic production in 1998. Hedegaard Foods is a major organic egg supplier.²²

6.5 Supply Chain

Imports of organic food are concentrated in a few companies. Some of the larger ones and their specialties are:²³

¹⁶ USDA, GAIN report, "Denmark, Organic Products", June 2000.

¹⁷ Ecoweb, "Danish Dairies Plan for 100% Organic Feeding", March 2001.

¹⁸ DFAIT, "The Organic Food Market in Denmark", 2000.

¹⁹ International Trade Centre, "Organic Food and Beverages: World Supply and Major European Markets", 1999.

²⁰ International Trade Centre, "Organic Food and Beverages: World Supply and Major European Markets", 1999.

²¹ "Scholars Discover the Truth Behind the Rosy Organic Picture".

²² OTA, Organic Insights, "Export Study", 2000.

- Biodania AmbA – organic fruits and vegetables
- Urtekram – largest importer and packer of organic food and non-food products
- Unikost – importer and packer of conventional and organic food
- Bio Trading – importer and trader of raw materials for bakeries and food companies

The organic food-processing sector is very fragmented with over 400 small companies. Well known organic food processors include: Drabaeks Molle (cereals and flour); Nutana (frozen dinners, frozen vegetables, pasta, rice, etc); and Schulstad Brod (bread and bakery products).²⁴

Companies producing organic prepared feeds include:

Korn-og foderstof kompagniet (KFK):²⁵

- Currently has a 30% market share in the prepared feed market in Denmark, producing about 1.5 M tonnes of compound feed. Less than 2% of its total production is of organic compound feed. More detailed information including prices is shown below.

Prepared Feed Production by KFK (Denmark)

	Total Tonnes	% Organic	Organic Tonnes	US\$/Tonne
Pig Feed	900,000	< 1%	9,000	312
Cattle Feed	350,000	7%	24,500	281
Poultry Feed	180,000	0%		
Total	1,430,000	2%	33,500	

Robyn Cross, "Export Potential for Organic Stockfeed and Organic Meat to the EU", July 2000

- The company may source imported organic grain through brokers or directly. Soybean meal is imported from the US, Argentina, and the Ukraine. Rape meal is imported from the UK, Hungary, Poland, and Germany.

²³ International Trade Centre, "Organic Food and Beverages: World Supply and Major European Markets", 1999.

²⁴ International Trade Centre, "Organic Food and Beverages: World Supply and Major European Markets", 1999.

²⁵ Robyn Cross, "The Export Potential for Organic Stockfeed and Organic Meat to the EU and Mechanisms for the Development of the Organic Industry", July 2000.

- This company was not interested in importing prepared organic feed because of the high tariffs on compound feed and its preference for producing its own prepared feed.

Dansk Landbrugs Grovvarerelskab (DLG):²⁶

- This company produces about 1.5 M tonnes of compound feed each year, representing 25% of the total market. It has 24,000 farmer members. No information was available on its organic prepared feed production.

One of the major organic grain importers is Carl Hoeffner. It indicated in the Australian study that it would be interested in importing prepared organic feed from Australia.

The retail trade is concentrated. FDB Coop Denmark, Dansk Supermarket, and another group control 70% of the retail market. FDB has a 33% market share. It has 700 organic products and 2 private organic labels. Its import group, NAF Intergroup, handles its imports. In 2001, organic products are expected to represent 11% of its sales. Dansk Supermarket has a 22% market share. It does not import organic food but purchases it from processors and packagers.²⁷ (OTA)

6.6 Opportunities and Barriers for Exporters

High tariffs, a preference for locally produced feed, and lower organic percentages for animal feed significantly reduce the attractiveness of this market for imported prepared feed.

Labeling requirements also limit the accessibility of the Danish market for processed organic products. *"While transportation times, high transportation costs and duties may make some organic foods impossible to ship to the Danish market, the greatest obstacle for Canadian suppliers is consumer acceptance of organic products from outside the EU. Danish consumers have shown a strong preference of domestically produced organic foods, which have the government mark (the O logo) on the packaging. As a result, the best opportunities for Canadian suppliers are through shipping bulk or raw materials that can be processed and packed in Denmark, thereby receiving the O logo."*²⁸ Because of the regulations regarding the O label, most imported organic foods are imported in bulk or raw form. Once processed or further packaged they are then eligible for the O label. Typically imported food is not allowed to use the O logo unless processed or packaged in Denmark.

²⁶ Robyn Cross, "The Export Potential for Organic Stockfeed and Organic Meat to the EU and Mechanisms for the Development of the Organic Industry", July 2000.

²⁷ OTA, Organic Insights, "Export Study", 2000.

²⁸ DFAIT, "The Organic Food Market in Denmark", 2000.

Imports of cereals, animal feed, and dried organic goods have been increasing. Dairy products and produce are supplied domestically or by EU countries. Denmark usually imports organic grains, pulses and berries from Germany, the Netherlands, Hungary, Poland, Czech Republic, and other East European countries. These countries have excess supply and much lower prices than Denmark. Competition from Eastern European countries is expected to intensify by 2005.²⁹

Potential imports from Canada include grains and flour, pulses, maple syrup, berries, jams, and honey, herbal teas. Because the growth in the market is much slower now, exporters need to concentrate on marketing, quality assurance, and new conventional food products.³⁰

For Canadian exporters, the US poses the most competition because of similarities in duties, tariffs, and transportation costs.³¹

6.7 Buyer List

The following list of organic grain users was developed.

Danish Buyers List				
		Phone	Fax	E-Mail
Carl Hofner I/S	Bagsvaerd Feed	45-44-44-2700	45-44-44-6400	
DLG Okologi	Holstebro Feed	45-97-46-8488	45-97-46-8565	ssn@dlg.dk
A/S Carl Rasmussen	Sonderso Feed	45-64-83-1100	45-64-83-1187	
Portrat einer Oeko-Meierei	Dairy			

²⁹ Infood, "The Danish Market for Organic Food, 1995 to 2005", 2000.

³⁰ Infood, "The Danish Market for Organic Food, 1995 to 2005", 2000.

³¹ DFAIT, "The Organic Food Market in Denmark", 2000.

7. TARGET MARKET – FRANCE

7.1 Development

Organic agriculture is not developing as rapidly as it is in other EU countries. This is despite the early introduction (1980) of national regulation. France had the most organic farms and the most organic land in 1985. By 2000, however, it ranked fourth in terms of farm numbers and third in terms of organic farmland. There were 9,000 organic farms with an organic land base of 400,000 ha in 2000.¹ Development stagnated because of the perceived lack of government support and poor implementation of the EU regulations on organics. Growth occurred again after 1995.²

The government has a plan to convert 1 M ha of farmland to organic and increase the number of organic farms to 25,000 by 2005.³ The government provides financial support to the industry to increase and improve production and distribution (about \$15 M C per year).⁴

BSE has stoked the interest in organic production by conventional producers. In France, between 3,000 and 3,500 farmers are expected to become organic this year. *"More and more farmers are looking at organic production. On the one hand, consumer demand is growing for products of quality, particularly organic products. But it's also producers who are realizing the problems of mainstream farming, says Benoit Vergriette, of a French organic farmers' union. "They are asking themselves: 'How is it possible that we've gotten to such an aberrant system in which we have to slaughter two million head of cattle?'"*⁵

7.2 Regulation

The first standards for organic production in France were developed in 1972 and legislation was passed in 1981. The state logo (Agriculture Biologique) was launched in 1988. There are five inspection bodies and five certification bodies. Organic products containing more than 95% organic ingredients, produced and processed within the EU, and certified by one of the inspection bodies can carry the AB logo.⁶

AB indicates compliance with both French and EU regulations. Imported products may use the AB logo if certain requirements are met. If the exporting country is

¹ IFOAM

² OTA, Organic Insights, "Export Study", 2000.

³ OTA, Organic Insights, "Export Study", 2000.

⁴ DFAIT, "The Organic Food Market in France", 2000.

⁵ OCIA Communicator, "Food Scars See Organic on the Rise in EU", March/April 2001.

⁶ Organic Europe, "Organic Agriculture in France".

not an Article 11 country, than the importer must obtain one certificate for each product and apply for import permission. The permit remains valid for one year.⁷

There are five organic certification bodies in France. These are Ecocert SARL, Qualite France, Afaq-Ascert International, Qualite Nord – Pas de Calais, and Usale.⁸

The EU regulations for organic animal production allow significant deviations from 100% organic content. Readers are referred to the regulatory chapter for further information.

7.3 Market Size and Growth

French organic sales at the retail level were about 1.3 B US\$ in 2000 compared to 720 M US\$ in 1997. Organic sales represent a very small fraction of total retail sales (less than 1%).⁹ It is unlikely that retail sales will reach 2.5 B US\$ by 2002 as some have suggested. However, the market should grow by 20% to 25% per year over the next five years.¹⁰

Barriers to the expansion of the French retail market include high premiums, poor communication with consumers, product appearance, inefficient distribution, and lack of accessibility.¹¹

7.4 Products

In terms of the retail market, the following segments have the largest sales: cereals (33%), dairy (25%) and fresh fruits and vegetables (20%). Meat accounts for only 5% of total sales. Dairy and meat sales are expected to grow by over 20% annually. Consumption of organic pork is increasing so rapidly that imports are required to meet demand.¹²

The largest proportion of French organic land is in grassland and fodder crops. Of its 36,000 ha of arable crops in 1998, cereals were grown on 26,000 ha.¹³ Imports of organic products were valued at 50 M euro in 1998. Cereals were imported from North America and South America. Until the domestic supply expanded, meat was imported from Germany. About 17% of organic product is

⁷ International Trade Centre, "Organic Food and Beverages: World Supply and Major European Markets", 1999.

⁸ Organic Europe, "Organic Agriculture in France".

⁹ Helga Willer and Minou Youssefi, "Organic Agriculture Worldwide 2001, Statistics and Future Prospects", IFOAM, 2001.

¹⁰ OTA, Organic Insights, "Export Study", 2000.

¹¹ International Trade Centre, "Organic Food and Beverages: World Supply and Major European Markets", 1999.

¹² International Trade Centre, "Organic Food and Beverages: World Supply and Major European Markets", 1999.

¹³ Foster and Lampkin, "Organic and In-Conversion Land Area, Holing, Livestock and Crop Production in Europe", October 2000.

exported. Exports consist mainly of added value grain products. Bulk cereals are exported to Germany and Scandinavia. ¹⁴ Organic animal feed is in short supply. In 1998 the feed deficit was 20,000 tons (soybean equivalent) and growing¹⁵.

The average price for organic poultry feed, according to an Australian study, was \$645US/tonne and for organic pig feed the average price was \$820/tonne. The product is generally sold in bags although it is also available in bulk. Transport costs are very high in France and may equal the value of the organic feed shipment.¹⁶

Although the production of organic feed grains is increasing, organic sources of protein are in very short supply. Some organic pig producers are said to be considering reverting to conventional production because of the shortages.¹⁷

The table below shows the increase in organic livestock numbers that has occurred from 1995 to 1999. The greatest growth has occurred in pigs, table chickens, and sheep.¹⁸

	Organic Livestock in France					1999CAGR
	1995	1996	1997	1998	1999	
Dairy Cows	9,500	13,665	15,135	19,641	19,911	20%
Beef Cows	5,637	10,178	12,816	15,868	23,000	42%
Sheep	10,402	16,258	29,216	41,877	63,545	57%
Goats			6,867	7,923	12,186	
Pigs		6,047	8,390	20,919	37,648	84%
Laying Hens		450,225	691,053	1,044,000	1,355,315	44%
Table Chicken		992,258	2,335,626	3,594,000	5,441,152	76%
Organic Europe, "Organic Agriculture in France"						

In 1999 the domestic production of organic milk was 96 M litres. Domestic production is forecast to increase to 250 M litres in 2000. France imports organic milk from Germany and Belgium (23 M litres) to fill demand.¹⁹ Production of organic dairy products in France is shown below.²⁰ The organic dairy market is forecast to grow by 20% on an annual basis.

	French Organic Dairy Production, Tonnes		
	1998	1999	% Change
Packaged Fluid Milk	29,148	51,077	75%

¹⁴ Organic Europe, "Organic Agriculture in France".

¹⁵ OTA, Organic Insights, "Export Study", 2000.

¹⁶ Robyn Cross, "The Export Potential for Organic Stockfeed and Organic Meat to the EU and Mechanisms for the Development of the Organic Industry", July 2000

¹⁷ Robyn Cross, "The Export Potential for Organic Stockfeed and Organic Meat to the EU and Mechanisms for the Development of the Organic Industry", July 2000

¹⁸ Organic Europe, "Organic Agriculture in France".

¹⁹ USDA, "Organic Perspectives", November 2000.

²⁰ USDA, GAIN report, "Denmark, Organic Products", June 2000.

Short Shelf Life Products	5,450	11,630	113%
Cheese	1,711	2,910	70%
Cream	406	576	42%
Milk Powder	265	627	137%
Butter	734		

USDA, FAS, GAIN Report, "France, Dairy & Products, Annual",
2000

A large part of the domestic production of organic milk is sold as UHT milk through supermarkets. Bsenier and Natalia are major organic dairies. La Domaine de la Croix Morin, is an important private label organic milk producer.²¹

Food safety concerns have increased the demand for organic meat. Demand is greater than supply. The market for organic meat in France is forecast to grow by 20% per year.

The most developed market is for poultry with 170,000 free-range chickens produced monthly.²² The first entry into the organic meat market was by LDC, a large poultry producer.²³

Organic beef is popular because of relatively low cost. In growing the organic meat market, the most significant obstacle appears to be high price premiums.²⁴ The market for organic red meat is small. After a slaughter company Selvi formed a relationship with a retail outlet, red meat sales began to improve.²⁵

7.5 Supply Chain

According to Lohr, supermarkets and specialty stores each account for 45% of French organic food sales. The remaining 10% is through producer direct sales. This creates a fragmented distribution system that has historically been inefficient. It includes 4,200 organic farmers (direct sales), 40 importers, 700 processors, 5 national wholesalers, and 30 regional wholesalers. The distribution system began changing when Distriborg began distribution organic foods (company had sales of 250 M US\$ in 1999 and sells in Italy and Belgium also). A second major distributor entered the market in 1995 at the same time Carrefour and Monoprix started selling organic products in their supermarkets.²⁶

The ITC directory lists three firms that specialize in the **importation of organic grain**. These are Euro Breizh, Jean Jacques Boutou (agent for Tradin Organic BV, Netherlands), and Rene Devalance.

²¹ OTA, Organic Insights, "Export Study", 2000.

²² DFAIT, "The Organic Food Market in France", 2000.

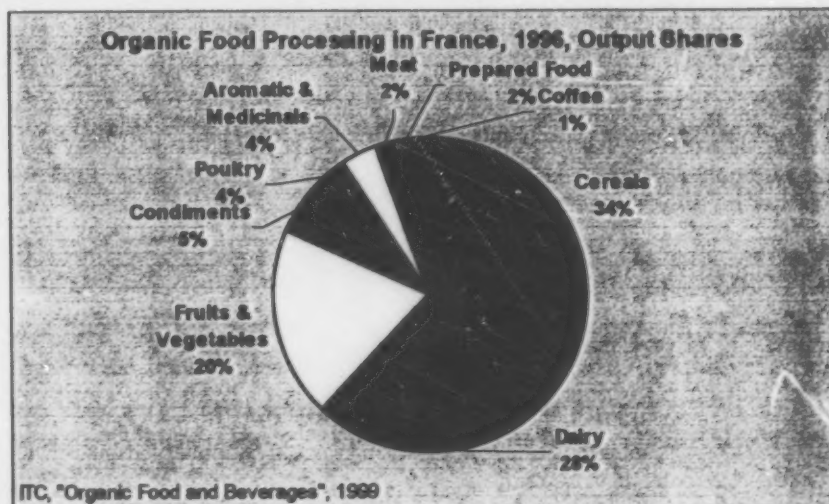
²³ OTA, Organic Insights, "Export Study", 2000.

²⁴ DFAIT, "The Organic Food Market in France", 2000.

²⁵ OTA, Organic Insights, "Export Study", 2000.

²⁶ OTA, Organic Insights, "Export Study", 2000.

There are about **700 organic food processors**. Most process milk or grains. The organic food-processing sector is growing annually by 17.5%.²⁷ The cereal segment, which includes bread and bakery products, represented 34% of total output in 1996. Other major segments were dairy and fruits and vegetables. The fastest growing processing segments are dairy, eggs, and poultry. Historically, small and medium sized enterprises accounted for 40% of total sales. This share will fall because major food companies such as Besnier, Bourgoin, and Danone/Bio Vivre have entered the sector. **Organic food processing is growing at about 20% annually.**²⁸



The market for organic feed is well developed with about six companies producing and distributing product.²⁹

Organic feed processors in France include the following companies:

- Thivat Nutrition Animale
Jean-Marc AYME
B.P. 28
03140 CHANTELLE France
Tél. : 04 70 90 60 80
Fax : 04 70 90 60 12

²⁷ Organic Europe, "Organic Agriculture in France".

²⁸ International Trade Centre, "Organic Food and Beverages: World Supply and Major European Markets", 1999.

²⁹ International Trade Centre, "Organic Food and Beverages: World Supply and Major European Markets", 1999.

- SNC Doux Aliment Sologne
 Route Sainte Fontaine
 18410 CLEMONT SUR SAULDRE, France
 Tél. : 02 48 81 60 00
 Fax : 02 48 58 84 98
- SANDERS BERRY
 B.P. 229
 ZA de Belleplace
 36400 LA CHATRE, France
 Tél. : 02 54 06 04 00
 Fax : 02 54 06 07 01
- Thoreau Nutrition Animale
 Gaël SAVROT
 B.P. 6
 45270 LADON France
 Tél. : 02 38 95 50 14
 Fax : 02 38 95 61 74
- Guyomarc'h
 B.P. 24
 45120 CHALETTE SUR LOING France
 Tél. : 02 38 89 44 44
 Fax : 02 38 93 92 45
- NUTRISUD
 M. ETIENNE Michel
 ZI B.P. 523
 26400 CREST France
 Tél. : 04 75 25 05 57
 Fax : 04 75 76 72 44
- Valsoleil
 M. MERLET
 ZA La Pimpie
 26120 MONTELIER France
 Tél. : 04 75 60 15 00
 Fax : 04 75 59 99 50
- COFNA
 La Decluny
 84 270 VEDÈNE France
 Tél. : 04 90 23 33 33
 Fax : 04 90 33 38 91
- Coop Agricole A1
 B.P. 936
 64, Boulevard Carnot
 62033 ARRAS CEDEX France
 Tél. : 03 21 23 08 08
 Fax : 03 21 23 97 40

- COPAM
 M. LARLET Laurent
 Rue de la Noue Hermandre ZI
 51520 ST MARTIN SUR LE PRE France
 Tél. : 03 26 69 24 10
 Fax : 03 26 68 47 09
- Doisy Prevital
 B.P. 39
 59267 PROVILLE France
 Tél. : 03 27 72 55 55
 Fax : 03 27 72 55 50
- Vanal
 Stéphane DEBAVELAERE
 69 Rue de Guarbecque
 62350 SAINT-VENANT, France
 Tél. : 03 2127 54 21
 Fax : 03 2102 86 60
- Nord Sanders
 Alimentation Animale
 59550 LANDRECIES, France
 Tél. : 03 27 77 74 77
 Fax : 03 27 84 72 37
- VIGALARDEN
 Ch. Gué de la Comtesse
 B.P. 49
 08303 REHTEL CEDEX, France
 Tél. : 03 24 39 50 10
 Fax : 03 24 38 42 80

All of these companies do manufacture organic poultry feed.

7.6 Opportunities and Barriers for Exporters

High tariffs, a preference for local production, and allowances for non-organic components in animal feed limit the potential of this market for prepared feeds.

Animal feed is in short supply. Best export prospects are for grains, nuts, dried fruits, flour, milk and organic protein for animal feed.³⁰

According to the Canadian government, *"Currently, French production of organic food is unable to meet the growing demand for these products. As a result, France imports approximately 30,000 tonnes of organic foods annually."* *"Historically, raw goods, such as wheat, have accounted for the vast majority of Canadian organic food exports. However, as the market for organic foods continues to grow,*

³⁰ FAS Online, "

opportunities for exports of consumer-ready products have also increased. Canada's reputation as being a clean, environmentally conscious country should also help exporters of organic foods.³¹

Imports from within the EU come primarily from Germany, the Netherlands, the UK, and Italy. French exports of organic products decreased from 1994 to 1997 because of expanding consumption and lower imports by Germany. The types of products exported shifted during the 1990's from raw and semi-processed to processed food products. Processed organic products are mainly to west European markets. France also exports organic eggs and poultry.³²

Canada's main competitor in the French market is the US because of the similarity in tariffs, duties, and transportation costs. In 1997 Canada exported about 20,000 tonnes of organic food to France. Bulk or raw materials are generally subject to lower tariffs than processed products.³³

Success in the French market does not come easily. **Barriers** to entering the French market include:³⁴

- Cultural differences in business
 - Conservative formality – must pay attention to detail (speaking French, knowing history etc)
 - Must accept bureaucracy and exhibit patience
- Language difficulties
- Lack of national organic standards.

Importers from non-Article 11 countries such as Canada must obtain an import certificate for each shipment through the importer's certification agency. The length of time it takes to receive an import license can vary between four weeks and many months.³⁵

7.7 Buyer List

The following list of buyers was developed from various sources:

³¹ DFAIT, "The Organic Food Market in France", 2000.

³² International Trade Centre, "Organic Food and Beverages: World Supply and Major European Markets", 1999.

³³ DFAIT, "The Organic Food Market in France", 2000.

³⁴ DFAIT, "The Organic Food Market in France", 2000 and OTA, Organic Insights, "Export Study", 2000.

³⁵ OTA, Organic Insights, "Export Study", 2000.

French Buyers List

		Phone	Fax	E-Mail
Coop Agricole A1	Arras Cedex	03 21 23 08 08	03 21 23 97 40	
Guyomarch	Chalette Sur Loing	02 38 89 44 44	02 38 93 92 45	
Thivest Nutrition Animale	Chantelle	04 70 90 80 80	04 70 90 80 12	
SNC Doux Aliment Sologne	Clemonr Sur Saudre	02 48 81 80 00	02 48 58 84 98	
Nutrisud	Crest	04 75 25 05 57	04 75 76 72 44	
Sanders Berry	La Chatre	02 54 06 04 00	02 54 06 07 01	
Thoreau Nutrition Animale	Ladon	02 38 95 50 14	02 38 95 61 74	
Nord Sanders	Landrecies	03 27 77 74 77	03 27 84 72 37	
Valeoleil	Montellier	04 75 60 15 00	04 75 59 99 50	
Setaig France	Pieubian	33-0-296-2266-39	33-0-296-2296-3	2setaig@setaig.com
Thivest Nutrition Animale	Poulligny Notre Dame			
Daisy Prevital	Provile	03 27 72 55 55	03 27 72 55 50	
Vigalarden	Rehtel Cedex	03 24 39 50 10	03 24 36 42 80	
Vanal	Saint-Venant	03 2127 54 21	03 2102 86 80	
Coparn	St. Martin Sur Le Pre	03 26 89 24 10	03 26 86 47 09	
Cofna	Vedene	04 90 23 33 33	04 90 33 38 91	

8. TARGET MARKET – GERMANY

8.1 Development

Organic agriculture has had a long history in Germany. The organized land and food reform movement was active during 1893 to 1925. During this time special stores to sell organic product were established. Biodynamic agriculture originated in 1924. Organic products remained confined to the Reform stores until the 1960's. The industry has grown rapidly since conventional retailers began selling organic products.¹

Currently, Germany has 11,000 organic farms with an organic land base of 500,000 hectares. In 1998, West Germany had 5,898 organic farms with an average farm size of 31.5 ha. East Germany had 888 farms with an average size of 188 ha. Until reunification in 1990, organic farming was actually illegal in East Germany. East German farmers because of lower prejudices towards organic farming and very supportive incentives to convert have rapidly adopted organic farming. Organic production in East Germany has a lower cost of production.²

8.2 Regulation

Organic agriculture in Germany became regulated with the EU's 1991 regulation. The existence of regulation has facilitated industry growth. The competent authority supervises certification bodies in each state. These authorities also authorize imports from third countries. German organic standards are generally higher than provided for by EU legislation. Imports from third countries generally have to be inspected by a certifying body even if the EU judges them to be equivalent.³

QAI (Quality Assurance International) received German accreditation in 1999. QAI is the only company in North America eligible to certify organic foods prior to movement to Germany.⁴

Organic producers receive more than 100 M CDN\$ annually. The organic sector would like to see payments to them institutionalized in the Common Agricultural Policy. If this occurs, the supply of organic product will begin exploding.⁵

¹ International Trade Centre, "Organic Food and Beverages: World Supply and Major European Markets", 1999.

² International Trade Centre, "Organic Food and Beverages: World Supply and Major European Markets", 1999 and Organic Europe, "Organic Agriculture in Germany", 2001.

³ International Trade Centre, "Organic Food and Beverages: World Supply and Major European Markets", 1999.

⁴ DFAIT, "The Organic Foods Market in Germany", 2000.

⁵ DFAIT, "The Organic Foods Market in Germany", 2000.

AGOL is the umbrella organization for German organic producer organizations. It has nine members. Bioland with 3,385 farms is the largest organization. Demeter with 1,333 farms was founded in 1928. Naturland is also important and has 1,125 members. **AGOL standards are stricter than EU regulation.** For example, they require the conversion of the whole farm and disallow more food processing additives.⁶

AGOL and CMA (State marketing agency) launched a new German bio-label in 1999 that can be used on both domestic and imported product that is produced in accordance with AGOL standards. While this should help expand the market, because the logo can only be used in conjunction with a logo from an AGOL member, market growth may be limited.⁷

8.3 Market Size and Growth

Germany is the **largest market for organic food in Europe** and is the second largest in the world. In 2000 organic retail sales were 2.5 B US\$. Sales in 1997 were 1.8 B US\$. Germany's organic market has the lowest growth rate in Europe at 10%.⁸

Some experts believe that organic food could represent 10% of sales by 2005 compared to 2% in 2000. Demand is growing because of increasing demand of healthier and more environmental friendly foods. As organic foods become more available (supply and access), prices will fall and the market will expand.⁹

However, the organic industry has some **structural and marketing issues** to resolve before steady rates of growth can occur. **The development of the German organic market may be very volatile** for the following reasons:¹⁰

- ❑ There is a **proliferation of labels** that is confusing consumers. An attempt to create a national logo, Okoprufzeichen, will likely be unsuccessful because it excludes some producer certification schemes and importers cannot use it.
- ❑ Not all the major supermarket chains are **equally committed to organic product**. Few chains excel at selling these premium products. The supermarket environment is very competitive which is likely to reduce margins. The impact of the entry of Wal-Mart is also creating uncertainty.
- ❑ There has been **some opposition by parts of the organic industry to supermarkets selling organic**. Some processors have resorted to creating

⁶ Organic Europe, "Organic Agriculture in Germany", 2001.

⁷ International Trade Centre, "Organic Food and Beverages: World Supply and Major European Markets", 1999.

⁸ Helga Willer and Minou Youssefi, "Organic Agriculture Worldwide 2001, Statistics and Future Prospects", IFOAM, 2001.

⁹ DFAIT, "The Organic Foods Market in Germany", 2000.

¹⁰ OTA, Organic Insights, "Export Study", 2000.

new ventures that deal exclusively with supermarkets. Others choose either the supermarket or the specialized stores to supply.

- The organic industry is very divided and its association has been terminated. This makes it difficult to use generic organic advertising to promote the industry.

8.4 Products

The value of sales and shares for organic food categories for 1998 are shown below. The leading foods were fruits and vegetables, dairy (including eggs and tofu), and bread and bakery products.¹¹

German Organic Food Sales, 1998

	M of US\$	Share
Fruits & Vegetables	331	18.4%
Dairy, Eggs, & Tofu	295	16.4%
Bread & Bakery	257	14.3%
Baby Food	200	11.1%
Pasta, Dried Fruit, Cereals	129	7.2%
Whole Grains, Nuts	111	6.2%
Bread Spreads, Honey	92	5.1%
Chocolate, Candy, Cookies	74	4.1%
Soups, Convenience Foods	65	3.6%
Meat & Sausages	55	3.1%
Alcoholic Beverages	55	3.1%
Tea	37	2.1%
Coffee & Cocoa	37	2.1%
Juices	37	2.1%
Oils & Spices	27	1.5%
Total	1,802	
OTA, "Export Study"		

In 1998 over 50% of organic land in Germany was in grassland and fodder crops. Arable crops accounted for 34% of total organic acres, or 140,000 ha. In 1997, Germany had about 90,000 ha of organic cereal crops. In 1998, Germany was the second largest producer of organic dairy cows, beef cows, and hogs with 65,000, 150,000, and 50,000 animals, respectively. Austria ranked first in both dairy and beef cow numbers. Denmark was the largest producer of organic pork. Germany had 700,000 organic poultry birds in 1998.¹²

The organic prepared feed industry in Germany is very competitive because of the oversupply of organic cereal grains and the availability of cheap imports from

¹¹ OTA, Organic Insights, "Export Study", 2000.

¹² Foster and Lampkin, "Organic and In-Conversion Land Area, Holing, Livestock and Crop Production in Europe", October 2000.

Eastern Europe. The average prices for organic prepared feeds in 2000 are shown below. Poultry feed is about 80 US\$/tonne more than cattle prepared feed. Organic prepared feeds are typically twice the price of conventional prepared feeds. The feed is sold bulk and in bags and is generally sold directly to the farmer from the mill.¹³

German Organic Feed Prices, 2000	
	US\$/T
Poultry Feed	367
Cattle Feed	286
Pig Feed	310
Robyn Cross, 2000	

According to a survey by the Australian government, German organic mills source soybean from Europe, potatoes and protein from the Netherlands, and corn from Austria and Hungary. The survey found that the German mills would not source organic feed from outside the EU because Bioland and Naturland prohibit imports of organic feed from outside the EU. Mills that did so would lose their organic status.

Organic dairy sales have been growing quickly and in 2000 may represent 18% of total organic sales. Organic milk is over supplied with as much as 50% being sold to conventional channels. This has primarily been because of a lack of organic dairies within transport distance of dairy farms. Within the dairy sector, milk, cheese, yogurt, butter and quark are the main products (in order).¹⁴ The dairy market is expected to reach 1.2 B CDN\$ by 2001.¹⁵ Andeschser Molkerei Scheitz GmbH and Molkerei Sobbeke are leading organic dairies.¹⁶

Meat is the fastest growing organic sector at the retail level, perhaps by 25% per year. The rapid growth is being fueled by food safety concerns (BSE) and animal welfare concerns. Previous growth was slow because of high production costs (feed for poultry and hogs expensive), high costs of processing, slaughtering, and distribution (because of small throughput), and the vegetarianism associated with organic food consumption. The mainstreaming of organic consumption, production, processing, and distribution is changing this. Increased involvement by retail food chains has also resulted in growth. Rewe, a major supermarket chain, has formed an alliance with a producer's association Naturland in order to obtain

¹³ Robyn Cross, "The Export Potential for Organic Stockfeed and Organic Meat to the EU and Mechanisms for the Development of the Organic Industry", July 2000.

¹⁴ OTA, Organic Insights, "Export Study", 2000.

¹⁵ DFAIT, "The Organic Foods Market in Germany", 2000.

¹⁶ International Trade Centre, "Organic Food and Beverages: World Supply and Major European Markets", 1999.

standardized product. Edeka and Biopark have also formed a producer-retail alliance.¹⁷

The market for organic meat is about 440 M CDN\$ annually. Beef is cheap to produce (pasture them on organic grass), while poultry and hogs must be fed organic feed, which raises costs. The price premium for organic meat is about 30% to 40%. This high differential is limiting demand.¹⁸

Germany is almost self-sufficient in organic grain.¹⁹ Trade liberalization and CAP reform has resulted in lower grain prices in Germany. In some time periods, organic production of grain has exceeded demand, causing prices to fall by 50%. Prices have also been depressed because of cheap imports from Romania, Czech Republic, Poland, and the Ukraine. Falling prices also condition consumers to expect to obtain organic products at more reasonable prices.²⁰ There are import opportunities for organic flour mixes and cereals for human consumption.²¹

Germany is the largest importer of organic products. In 1998, imports totaled 154 M US\$. Fruits and vegetables accounted for the largest share followed by the dairy, egg, and tofu group. In the latter group, imports are primarily soybean and tofu.²²

8.5 Supply Chain

Perhaps because of their historical significance, specialty stores (1,700 in number) continue to dominate the retail distribution of organic food in Germany, accounting for 45% of total sales. Supermarkets account for 25% of sales while producer direct sales represent 20%. Only in Italy does producer direct sales have a larger share of the market.²³

The ITC Directory lists the following importers of organic grain:

- CARE Naturkost GmbH & Co
- Davert Muhle
- Muhldorfer Naturkornmuhle

¹⁷ International Trade Centre, "Organic Food and Beverages: World Supply and Major European Markets", 1999 and OTA, Organic Insights, "Export Study", 2000.

¹⁸ DFAIT, "The Organic Foods Market in Germany", 2000.

¹⁹ OTA, Organic Insights, "Export Study", 2000.

²⁰ International Trade Centre, "Organic Food and Beverages: World Supply and Major European Markets", 1999.

²¹ OTA, Organic Insights, "Export Study", 2000.

²² OTA, Organic Insights, "Export Study", 2000.

²³ Luanne Lohr, "Factors Affecting International Demand and Trade in Organic Food Products", University of Georgia, February 2001.

- Ubelhor KG Naturkost Imex

Organic animal feed mills in Germany include the following companies:²⁴

Reudink Biologische Voeders
Am Weidengraben 18
37213 Witzzenhausen
Telephone +49 5542 910 053
Fax +49 5542 910 765

Curo Spezialfutter
Dorfstr 40
59320 Ostenfelde
Telephone +49 2524 5093
Fax +49 2524 6093

Historically the **processing sector** has been dominated by a large number of small firms. Major players include Hipp (organic baby food), Rapunzel, and Naturata. Nestle has some organic lines. Danone's venture into organic yogurt was unsuccessful.²⁵

Wholesalers operate on a regional basis. In the 1990's large supermarket chains entered the organic market. Pioneers were Tegut and Tengelmann. Traditional organic manufacturers sell to the natural and organic only food stores and manufacture private label products for supermarkets.²⁶

The German **supermarket channel** is very competitive and faces lots of downward price pressure. In order to be competitive with conventional products and secure a larger share of the market, **organic products must become more competitive**. Some specialty stores may re-position themselves as more exclusive in order to retain premium pricing. Some damage has been done to the price structure by supermarkets that carry organic products as a service item that does not have to earn a return.²⁷

8.6 Opportunities and Barriers for Exporters

The regulatory barriers to accessing the market for prepared feeds appear even larger in Germany than in other EU countries. The feed mills surveyed in the Australian study reported that the organic regulations in place **forbid the**

²⁴ Robyn Cross, "The Export Potential for Organic Stockfeed and Organic Meat to the EU and Mechanisms for the Development of the Organic Industry", July 2000

²⁵ OTA, Organic Insights, "Export Study", 2000.

²⁶ OTA, Organic Insights, "Export Study", 2000.

²⁷ International Trade Centre, "Organic Food and Beverages: World Supply and Major European Markets", 1999.

importation of prepared feed from outside the EU. Besides the country regulation, high tariffs also limit the market access for prepared feeds.

Canada's largest organic exports to Germany are maple syrup, grains, and seeds (sunflower seeds, linseeds). There are opportunities for products like pasta, meats, and animal feed.²⁸

Germany appears to be self-sufficient in organic grain. Prices are low because of large supplies, policy changes, and the availability of inexpensive imports from Eastern Europe.

The federal government provides the following advise about the export potential for other products by Canada:

- *"Bulk goods, such as wheat and pulses, account for the largest share of Canadian organic food export to Germany. However, as the market for organic foods continues to grow, opportunities for exports of consumer-ready products are also increasing. Canada's reputation as being a clean, environmentally friendly country should also help exporters of organic foods."*²⁹
- *"The best opportunities for Canadian manufacturers are pasta, breakfast cereals, and frozen bread/biscuits. However, a large number of German farmers have switched to growing organic wheat recently (which may have a negative impact on Canadian organic wheat exports to Germany). This has given manufacturers a steady supply for organic products, while keeping the price difference between organic and conventional lines low."*³⁰

The process of exporting organic products to Germany can be lengthy. Although an import license can be received within two weeks it can take two months.³¹

8.7 Buyer List

The following buyer list was assembled.

²⁸ DFAIT, "The Organic Foods Market in Germany", 2000.

²⁹ DFAIT, "The Organic Foods Market in Germany", 2000.

³⁰ DFAIT, "The Organic Foods Market in Germany", 2000.

³¹ OTA, Organic Insights, "Export Study", 2000.

German Buyers List

		Phone	Fax	E-Mail	Swine	Cattle	Sheep
Reforma-Werk Andreas Stallich GmbH	Feed						
GS Agri	Feed				X	X	X
GS Agri	Feed				X	X	X
Uebelhoer KG Naturkost Imax	Importer	49-7557-820	49-7557-834				
GS Agri	Feed				X	X	X
CARE Naturkost GmbH	Importer	49-4207-814-444	49-8831-328860				
Muhldorfer Naturkommunale GmbH	Importer	49-8831-37730	49-8831-377346				
GS Agri	Feed				X	X	X
Davert Muhle	Importer	49-2598-8828	49-2598-8881				
Sugemi - Thamar	Feed			eugemi.thamar@t-online.de			
Rausch Biologische Futtermittel	Feed			beuten@t-online.de			
Green Trade Net	Importer	49-69-811-328	49-69-824-884	oekologiemarketing@compuserve.co			
Welches Ei	Egg Prod						
Robert's	Poultry						
Bio Fleisch Nord Ost	Liveest Prod						
Die Thomas-Guteknechtsen fur Fleisch	Liveest Prod						

9. TARGET MARKET – US

9.1 Development

Organic farming originated in the 1970's as a "back to the land" movement opposed to pesticides and other synthetic inputs. One of the key features of the sector's development was the **close tie between producers and consumers**. Over the last 30 years about 70 producer-consumer organic food groups were established. Although the sector has grown and developed, the US is a decade behind Europe in organic production and market development.¹

The US government has never provided direct financial assistance to facilitate conversion. Some assistance has been provided at the state level. The Organic Cost Share program for 2000 and 2001 was approved in 1999 by the state of Minnesota. \$50,000 was allocated per year with \$15,000 for administration and \$35,000 for assistance to organic farmers. Each farm can have 67% of its annual certification and inspection costs paid. The payment per farm per year is capped at \$200.²

9.2 Regulation

In 1990 the **Organic Foods Production Act** was enacted. Its purpose was to protect consumers, facilitate interstate commerce, and establish national standards for marketing organic products. This act required that all but the smallest growers become certified by a private certification agency or a state. **Organic crops, eggs, and dairy could be labeled** as organic throughout the 1990's. It was not until 1999, however, that organic meat and poultry could be labeled as such. The **National Organic Program (NOP)** was developed over a long period and is currently being implemented. Full implementation will occur by October 2002.³ USDA must accredit all certifying agents (89 in number) by August 20, 2002.⁴

The **National List** was created in 1990. It contains allowable and prohibited substances for organic food production. The list is reviewed annually.⁵

The NOP will **replace state regulations and certifying procedures with one set of national standards**. Farms with sales less than \$5,000 are excluded. Some industry

¹ Minnesota Department of Agriculture, "The Status of Organic Agriculture in Minnesota", April 2001.

² Minnesota Department of Agriculture, "The Status of Organic Agriculture in Minnesota", April 2001.

³ FAS Online, "US and Global Organic Dairy, Livestock and Poultry Production: Implications for International Trade", December 2000

⁴ Minnesota Department of Agriculture, "The Status of Organic Agriculture in Minnesota", April 2001.

⁵ DFAIT, "The Natural/Organic Food Market in the United States", 2000.

experts believe that the new regulations will force small farms and companies out of the industry. The industry could then experience a rapid consolidation phase.⁶

Products meeting the **NOP labeling requirements** may use USDA's organic seal. Imported product that meets the NOP standards may be labeled "organically produced".⁷

9.3 Market Size and Growth

In 1996, the US retail market for organics was about 3.5 B US\$. Between 1996 and 2000 the market expanded rapidly, at about 22% per year. According to Packaged Facts the US market should continue to grow at about 21% per year in the short term. If it does then the retail market could reach almost 20 B US\$ by 2005. If however, the market expands more slowly at a rate of 15% per year, than the market could reach 15.7 B US\$.⁸ The growth is impressive in either instance. Expenditures on food in the US grew at an annual rate of about 4% per year during the last decade.⁹



According to different research sales could reach \$18 to \$20 B by 2010. In 1999 4,200 new natural or organic products were introduced compared to 3,200 in 1998. There is little brand preference or recognition.¹⁰

Factors such as inconsistent supply and labour shortages may limit industry growth. Farm labour and qualified certification inspectors may become short in supply.¹¹

⁶ DFAIT, "The Natural/Organic Food Market in the United States", 2000.

⁷ DFAIT, "The Natural/Organic Food Market in the United States", 2000.

⁸ Organic & Natural News, "Facts and Stats: The Year in Review", 2000.

⁹ USDA, ERS.

¹⁰ DFAIT, "The Natural/Organic Food Market in the United States", 2000.

9.4 Products

The US organic market is forecast to reach 13.1 B US\$ by 2003. The expected growth in major categories relative to 1998 is shown below. Over time produce's share is expected to fall as sales in other categories increase rapidly. **Meat sales are forecast to be 617 M US\$ in 2003.** During the 1998 to 2003, the OTA and Datamonitor expect that frozen foods and ready meals will grow the fastest. The total market is forecast to reach 13 B US\$ in 2003.¹²

US Retail Organic Market, M of US\$

	1998Share 98	2000	2003Share 03	CAGR 98-03		
Produce	3,486	65%	4,294	5,210	40%	8.4%
Frozen Foods	400	7%	813	2,101	16%	39.3%
Dairy	424	8%	832	2,015	15%	36.6%
Bakery & Cereals	201	4%	400	970	7%	37.0%
Ready Meals	145	3%	269	758	6%	39.2%
Chilled Foods	274	5%	401	635	5%	18.3%
Meat & Meat Products	168	3%	288	617	5%	29.7%
Baby Foods	84	2%	166	417	3%	37.8%
Other	112	2%	145	219	2%	14.4%
Soft Drinks	60	1%	91	153	1%	20.6%
Beer & Wine	46	1%	60	77	1%	10.9%
Overall	5,401		7,760	13,172		19.5%

FAS Online" US and Global Organic Dairy, Livestock and Poultry Production" Dec 2000

USDA estimates that there were 5,000 organic growers with 1.4 M ac in 1997. According to the Organic Farming Research Foundation there were **7,800 certified organic producers in 2000, an 18% increase from 1999.** In 1997, **63% of organic land was used for organic crops** with the remainder 37%, in pasture and rangeland. This was a significant change from 1992 when rangeland and pastureland represented 57% of all organic land. In 1997 there were 291,000 acres of organic grain.¹³

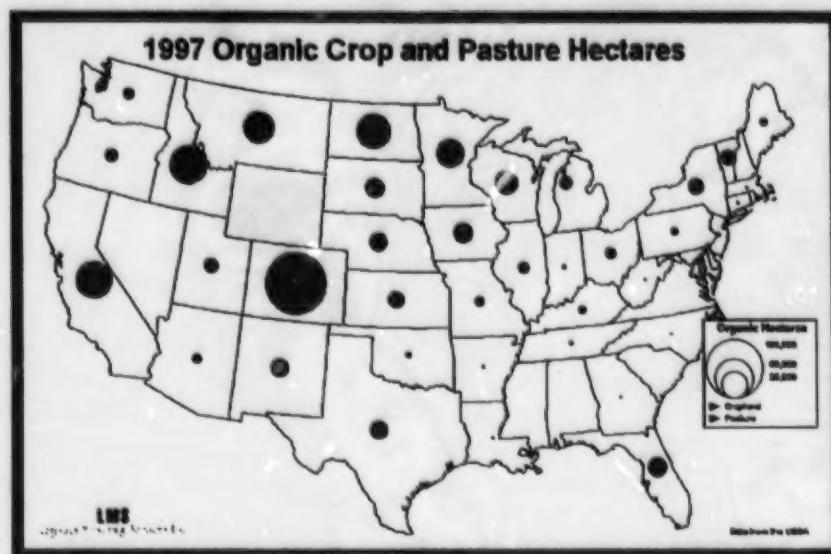
The geographic distribution of organic crop and pasture acres in the US in 1997 is shown below. Aside from Alaska, the largest acres of pasture were in Colorado, Montana, and New Mexico. The largest numbers of cropland acres were in Idaho, California, North Dakota, Montana, and Minnesota.¹⁴

¹¹ DFAIT, "The Natural/Organic Food Market in the United States", 2000.

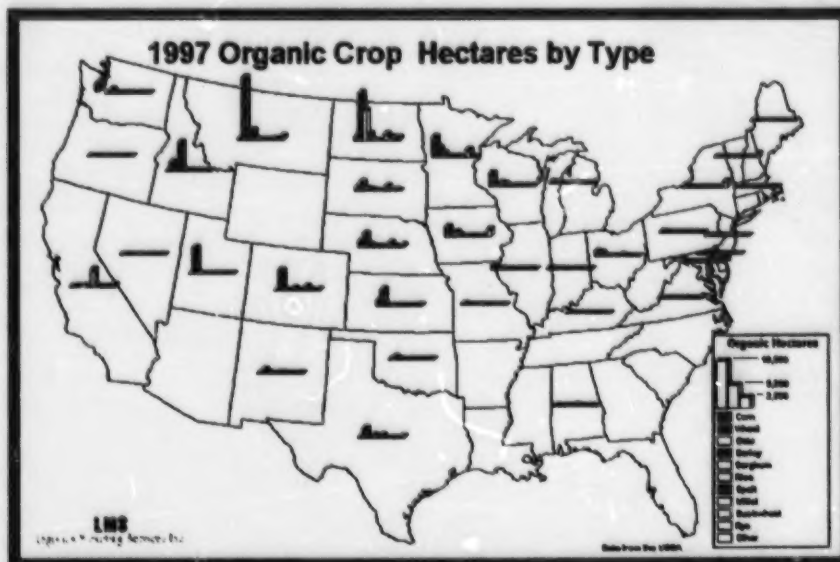
¹² FAS Online, "US and Global Organic Dairy, Livestock and Poultry Production: Implications for International Trade", December 2000.

¹³ USDA, ERS, and OFRP.

¹⁴ USDA, "US Organic Agriculture", 2000



The greatest numbers of acres of organic corn were in Minnesota, Wisconsin, Iowa, and Nebraska. Montana, North Dakota, Utah, and Colorado were the major organic wheat states. North Dakota was the major state for oats while Idaho, Montana, and North Dakota had highest acres of organic barley.¹⁵

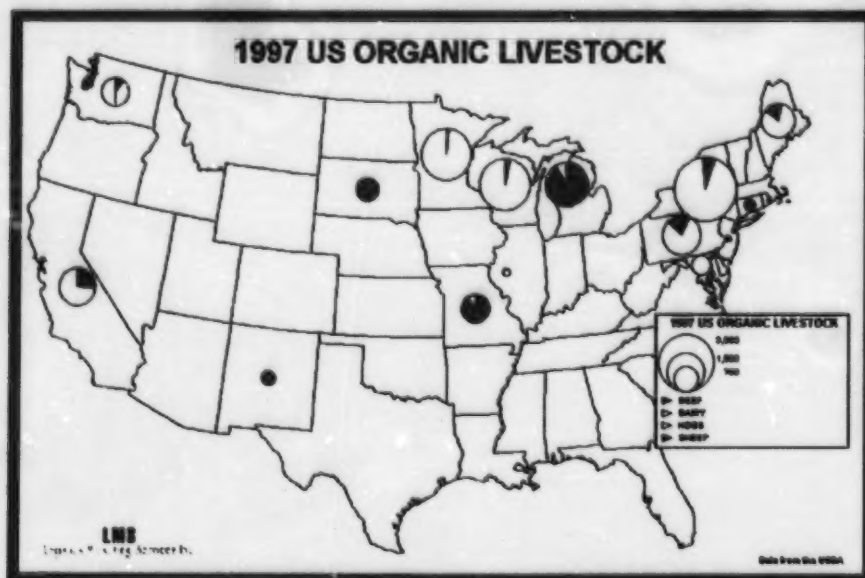


Since 1992 organic production has increased by about 20% per year. Some of the factors limiting its expansion include high barriers to entry (managerial and start-up costs), lack of economies of scale, and high risks involved in the conversion. Organic livestock production did not experience the growth that occurred in the

¹⁵ USDA, "US Organic Agriculture", 2000

crop, dairy, and egg sectors because until 1999 meat and poultry could not be labeled as organic. A lack of organic animal feed and competition for their use in human consumption also limited the growth of organic livestock. Other constraints to organic livestock production are higher production costs, longer conversion times, less intensive production, and the requirements for time and heat treatments for organic manure prior to applying to land. ¹⁶ Natural and organic beef is more costly to produce; at least 25% more compared to beef produced using growth hormones. ¹⁷

In 1997, the USDA data indicated that organic production of livestock and poultry was concentrated on the West and East Coasts and in the Chicago hub area as the following maps indicate. In 1997, Michigan, Missouri, South Dakota, and California were the major states for organic beef. Organic dairy was concentrated in New York, Wisconsin, Minnesota, Pennsylvania, Maine, and California. Of the three states reporting organic hogs in 1997, Washington accounted for virtually all of reported organic hogs. The major states for organic sheep were Pennsylvania, South Dakota, and Maine. ¹⁸



California was the major state or organic laying hens in 1997 followed by Virginia, Pennsylvania, and Ohio. The major state for organic broiler production was Pennsylvania while New Mexico accounted for 100% of organic turkeys. New York had the greatest number of other types of poultry. ¹⁹

¹⁶ FAS Online, "US and Global Organic Dairy, Livestock and Poultry Production: Implications for International Trade", December 2000.

¹⁷ Kansas State University, "Economic Issues with Natural and Organic Beef".

¹⁸ USDA, "US Organic Agriculture", 2000.

¹⁹ USDA, "US Organic Agriculture", 2000.



Since 1997, anecdotal evidence suggests that growth in organic beef has increased in Colorado and organic dairy has increased in California and Maryland. The organic poultry industry remains concentrated in North Dakota, New Hampshire, and Pennsylvania. California, Virginia, Pennsylvania, and Ohio remain the major areas for organic egg production²⁰

Information on the composition of organic feed is exceedingly difficult to find. In order to understand the **composition of conventional feed by animal type and by geography**, information on energy, protein and roughage use is shown below.²¹ These tables indicate the diversity of feed consumption. **Livestock tends to be fed what is available.**

Major Producer Locations and Principal Consumers of Energy Feeds - Conventional

Feed Ingredient	Location	Principal animals fed
.....		Swine, poultry, dairy cattle, beef cattle
Corn	Midwest (Illinois, Iowa, Indiana, Missouri, Minnesota), Nebraska	
.....		Beef cattle, swine, poultry
Sorghum	Central and Southern Plains (Kansas, Texas, Nebraska)	
.....		Beef cattle, sheep, swine
Barley	Pacific Northwest (Idaho, Washington), Northern Plains (North Dakota, Montana, Minnesota)	
.....		Horses, dairy cattle, rabbits
Oats	Upper Midwest, Northern Plains	
.....		Beef cattle, poultry, swine
Wheat	Southern Plains (Kansas, Nebraska), Southwest	

²⁰ FAS Online, "US and Global Organic Dairy, Livestock and Poultry Production: Implications for International Trade", December 2000.

²¹ USITC, "Animal Feeds", 2000.

Wheat by-products	Minnesota, New York, Kansas	Beef cattle, swine, poultry
Hominy feed		Dairy cattle
Beet pulp	 Illinois, Tennessee	
Citrus pulp	 California, North Dakota, Minnesota, Idaho	Dairy cattle
	 California, Florida	Dairy cattle

Source: USITC, Animal Feeds, 2000

Major Producer Locations and Principal Consumers of Protein Feeds - Conventional

Feed Ingredient	Location	Principal animals fed
Soybean meal	 Midwest (Illinois, Iowa, Minnesota, Ohio)	Swine, poultry, cattle
Cottonseed meal	 Central and Southern Plains (Texas, Kansas), California	Dairy cattle, beef cattle
Canola meal	 North Dakota, Minnesota, Idaho, Montana	Dairy cattle, beef cattle, swine
Sunflowerseed meal	 Upper Midwest/Northern Plains (North Dakota, South Dakota, Minnesota)	Dairy cattle, beef cattle, swine
Linseed meal	 Upper Midwest/Northern Plains (North Dakota, South Dakota, Minnesota)	Horses, dairy cattle, beef cattle
Corn gluten feed and meal	.. Midwest	Dairy cattle
Brewers grains	 California, Texas, Wisconsin, Florida	Dairy cattle
Distillers grains	 Kentucky, Indiana	Dairy cattle, swine, poultry
Meat and bone meal	 Midwest, Southern Plains, Southeast	Swine, poultry
Fish meal	 Gulf/Atlantic coasts (menhaden meal), Pacific coasts (tuna, anchovy)	Swine, poultry, fish

Source: USITC, Animal Feeds, 2000

Major Producer Locations and Principal Consumers of Roughages and Silages - Conventional

Feed Ingredient	Location	Principal animals fed
Alfalfa	 Southwest (Nevada, New Mexico, Utah), Midwest (Wisconsin)	Dairy cattle, beef cattle, sheep, horses
Red clover	 Midwest, Northeast	Beef Cattle, dairy cattle
Lespedeza	 Southern Plains, Southeast	Beef Cattle, dairy cattle
Timothy	 Midwest, Northeast	Horses, beef cattle, dairy cattle
Orchardgrass	 Midwest, Northeast	Beef cattle, dairy cattle
Fescue	 Southeast	Beef Cattle, dairy cattle
Bromegrass	 Northern Plains	Cattle, sheep

Source: USITC, Animal Feeds, 2000

The final table with information about conventional feed use shows the regional production of feed.

Primary Feed Production by Feed Type and Region, 1998 - Conventional

Region	Starter, grower, layer, breeder feed	Broiler feed	Turkey feed	Dairy feed	Beef cattle and lamb feed	Swine feed	Other feed	Total
Quantity (thousand metric tons, percentage feed used by region)								
Northeast	2,234 15.0%	2,752 7.3%	423 5.2%	2,804 18.2%	89 0.5%	329 2.0%	916 10.9%	9,637 8.0%
Midwest	4,573 29.6%	4,421 11.7%	3,239 39.5%	3,416 22.1%	1,861 10.1%	9,920 61.5%	27,287 32.5%	30,158 25.1%
West	1,746 11.3%		513 6.3%	4,603 29.8%	3,500 18.9%	510 3.2%	792 9.4%	11,664 9.7%
Plains	1,782 11.5%	3,486 9.2%	484 5.9%	1,404 9.1%	12,209 66.2%	2,366 14.6%	1,272 15.2%	23,003 19.2%
Southeast	3,675 23.8%	17,517 23.4%	2,759 33.7%	2,993 19.4%	549 3.0%	2,739 17.0%	1,363 16.2%	31,595 26.3%
Delta	1,387 9.0%	9,465 25.1%	784 9.6%	209 1.4%	253 1.4%	264 1.6%	1,335 15.9%	13,697 11.4%
Total	15,487 100.0%	37,641 100.0%	8,202 100.0%	15,429 100.0%	18,461 100.0%	16,128 100.0%	8,406 100.0%	119,754 100.0%

Source: USITC, Animal Feeds, 2000.

Region definitions: Northeast (Maine, New Hampshire, Vermont, New York, Massachusetts, Rhode Island, Connecticut, New Jersey, Maryland, Pennsylvania, Delaware); Midwest (Minnesota, Wisconsin, Michigan, Iowa, Missouri, Illinois, Indiana, Ohio); West (Montana, Idaho, Wyoming, Nevada, Utah, Colorado, Arizona, New Mexico, California, Oregon, Washington); Plains (North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, Texas); Southeast (South Carolina, Georgia, Alabama, Florida, Virginia, West Virginia, North Carolina, Tennessee, Kentucky); Delta (Arkansas, Louisiana, Mississippi)

What organic livestock are fed varies by region. Detailed feeding requirements are difficult to find. A University of Maine study into the feasibility of an organic grain milling and handling facility used the following organic feed requirements for dairy cows, meat chickens, and layers. The primary organic grains used are corn and soybeans that are sourced in the Mid West. The feed requirements for an

organic dairy cow assume that milk production per cow is less than the 20,000 lbs per year average by conventional dairy cows (a very low estimate of 13,500 lbs was considered to be unreliable). In Maine the non-grazing season runs from October through April. The meat chickens are produced only in the summer and are grown out over an eight-week period. Dairy customers would receive their feed in bulk form while poultry producers would receive bagged product.²²

Organic Feed Requirements in Maine

	Dairy Cow	Meat Chicken	Layer
	lbs/Day		
Non Grazing	10		
Grazing	8		
Annually	9.2		0.22
Grow Out			0.3
Smith et al, "The Feasibility of an Organic Grain Milling and Handling Facility in Central Maine", July 1999			

Organic dairy sales have grown by 50% per year recently. Although this growth will fall, dairy will grow faster than organic products in general. ²³

In 1999, sales of organic milk in US supermarkets reached 76 M US\$. An analysis of scanner data found that the **average price premium of organic milk was 60% over branded milk and 75% of private label milk.** Analysis further suggests that as total milk expenditures fall, the quantities purchased of organic milk will increase.²⁴

Contracting of production has increased. The supply chain is quite fragmented. This can create delays in paying the producer.²⁵

9.5 Supply Chain

Organic foods have penetrated the US market place. In 2000, supermarkets accounted for 44% of organic food sales followed by 31% for natural food supermarkets. ²⁶

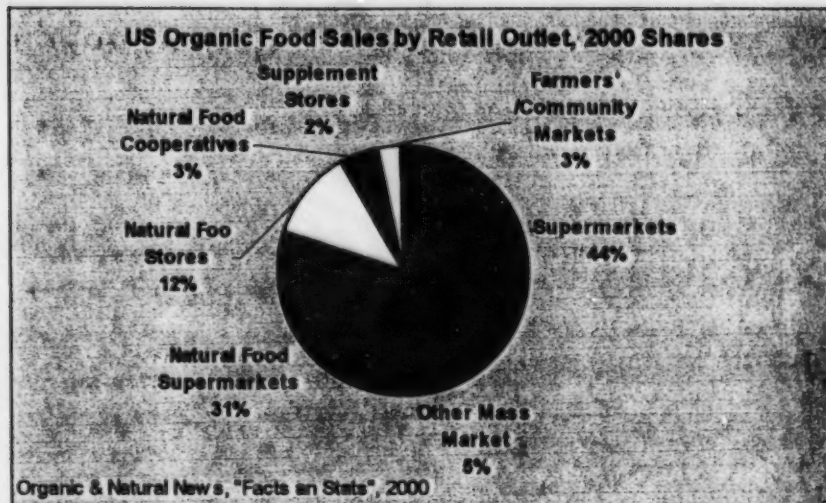
²² S. Smith, J. Leiby, H. Cheng, T. Allen, J. Hill, and D. Grant, "The feasibility of an Organic Grain Milling and Handling Facility in Central Maine", July 1999.

²³ DFAIT, "The Natural/Organic Food Market in the United States", 2000.

²⁴ Lewrene Glaser and Gary Thompson, "Demand for Organic and Conventional Beverage Milk", paper presented at the WAES 2000 meeting.

²⁵ Minnesota Department of Agriculture, "The Status of Organic Agriculture in Minnesota", April 2001.

²⁶ Organic & Natural News, "Facts and Stats: The Year in Review", 2000.



Two of the largest organic supermarket chains are Whole Food Market and Wild Oats. **Whole Food Market** is the largest US organic supermarket. Based in Texas it has sales of 1.8 B US\$ in 2000 from 117 stores²⁷. Wild Oats with sales of 838 M US\$ in 2000 was the second largest organic supermarket. It has at least 100 stores.²⁸ Natural food stores tend to be concentrated in the Pacific region followed by the South and the Northeast.

Organic poultry feed mills in the US are concentrated in the North East and the Mid-West/Chicago hub, with some on the West Coast. A map with these mills is shown below.



²⁷ Whole Foods Market.

²⁸ Wild Oats Markets

Organic livestock mills are concentrated in the North East region of the US as shown below.



A survey of US organic feed mills and feed users did not achieve an acceptable response rate after repeated attempts. A Pennsylvania feed mill reported that it purchased 80% of its requirements locally (within 100 miles) and obtained the rest from a broker. There was some interest in purchasing organic flaxseed and other ingredients from Saskatchewan. It also appears that large conventional poultry producers are converting to organic production.

It is difficult to assess the **degree of specialization** in the organic feed milling sector. Some companies like Modesto Milling in California report that organic prepared feeds represent only 1% of its business. Kreamer Feeds in Pennsylvania, on the other hand, dedicates a mill to the production of organic broiler, egg, turkey, beef, and hog feed and distributes them directly to producers and through a dealer network.

When the market for organic foods was much smaller, processing companies were **small and locally/regionally focused**. With the growth in the market, major conventional food companies have entered and long-term organic companies find themselves needing to merge and expand to survive. The growth in the market has also resulted in an increase in the number of production under contract. The market growth will also bring lower premiums for organic products.²⁹

Some of the major food companies that have entered the natural/organic food market are Kraft, Quaker Oats, Mars, Heinz, General Mills, JM Smucker and

²⁹ USDA, "Ag Outlook", June-July 2000

Gerber. Some smaller companies such as Worthington Foods, Gardenburger, New Organics, Natural Value, and Organic Food Products offer a full product range. In major food companies, organics is a niche product line. International companies that have entered the market include Novartis, Danone, and Nestle.³⁰

The world's largest organic food company is **Cascadian Farm**. Gene Kahn established the farm in 1971 to provide food for a nearby commune. The farm moved into processing in the late 1970's and soon began purchasing product from other organic producers. In 1990, financial difficulties forced the sale of part of the company to Welch's. Cascadian Farm acquired Muir Glen, an organic tomato processor and renamed the company Small Planet Foods. **General Mills purchased Small Planet Foods for \$70 M US.**³¹

Organic Valley Family of Farms is the largest organic farmer owned cooperative in North America. It currently consists of over 350 families in 14 states. It began in Wisconsin in 1988 with seven farms and was known as the Coulee Region Organic Produce Pool (CROPP). Organic Valley is the **largest organic milk supplier** in the US. It is now also producing organic meat. This cooperative had sales in 1999 of \$30 M.³²

Horizon Organic was founded in 1991 in Colorado. Sales in 2000 were \$127 M US, a 50% increase from the previous year. It considers itself the leading producer of organic dairy products. It recently acquired Rachel's, a UK organic yogurt processor, and Meadow Farms, a UK processor of private label organic milk. With these acquisitions, the company is taking its **"Happy Cow"** logo global. In the US Horizon Organic has three corporate dairy farms (Idaho, Maryland, and Colorado) and purchases the remainder of its organic milk from over 200 independent producers. Its corporate farms have over 6,700 organic dairy cows. UP (ultra pasteurized) milk accounted for 34% of its fluid milk sales in 2000. UP milk has a 55-day shelf life versus the 17 days for regular pasteurized milk. Horizon Organic has a network of 27 dairy processors and 20 non-fluid milk product processors in the US. **Organic feed is a significant cost for the company.** Although it produces some organic feed at its Idaho farm, **the majority of its feed requirement is purchased from independent organic growers.** This practice is expected to continue.³³

Alta Dena Certified Dairy, Stoneyfield Farm, and Straus Family Creamery are significant players in the organic dairy sector. The **Straus Family Creamery**, located in Northern California, produces its own organic milk, which it processes into milk, butter, yogurt, cream, and cheese. It produces about 60% of its own feed. The cows are fed a balanced diet of grain, hay, legume, silage, and fresh grass.

³⁰ DFAIT, "The Natural/Organic Food Market in the United States", 2000.

³¹ DFAIT, "The Natural/Organic Food Market in the United States", 2000 and New York Times Magazine, "Naturally", May 13, 2001.

³² USDA, "Ag Outlook", June-July 2000

³³ Horizon Organic, "Annual Report", 2000.

Stonyfield Farm was established in 1983 in New Hampshire as an organic farming school. Its assets at that time consisted of a yogurt recipe and some cows. It produces organic dairy products like yogurt and ice cream. **Alta Dean Certified Dairy** is located in southern California and produces a variety of organic dairy products.

Early companies in the **natural beef** market were Coleman Natural Meats and Laura's Lean Beef. Coleman now produces certified organic beef. Maverick Ranch is another large-scale organic beef supplier that was already active in the natural beef market. Maverick is the beef supplier for the US Olympic athletes. This company contracts production with ranchers and also operates ranches in Idaho and Oregon.

Petaluma Poultry is a large California producer of natural and organic chicken. The company's brands include Rocky the Range Chicken and Rosie the Organic Chicken. The organic chickens are fed certified organic corn and soybean flakes. Product is distributed through specialty food stores in the western area of the US.³⁴

Two large **conventional poultry processors** have recently introduced organic poultry market. Fieldale Farms, a Georgia processor, introduced "Springer Mountain Farms" organic chicken products in January 2000. Gold n' Plump, a Minnesota processor, introduced a line of organic chicken, North Country Farms, in the spring of 2001. Gold n' Plump contracts production with certified organic growers.³⁵

Margins in the natural food industry are falling. In 1999 gross margins averaged 19% to 20% compared to 33% in previous years. Mass marketed conventional foods typically have 12% gross margins.³⁶

9.6 Opportunities and Barriers

The survey found **no companies interested in purchasing organic prepared feed.** There was some indication that organic flaxseed was in demand as a substitute for organic non-GMO soybean. Feed mills appear to purchase the majority of their feed requirements from local sources and use a broker to obtain the rest. Organic brokers will continue to seek organic feed grain from Saskatchewan to fill shortages.

There is a lot of **competition in the world market for organic bulk commodities.** Eastern European countries and China, and Brazil are attempting to position themselves as low cost producers and export to the growth markets of Japan, Europe, and the US. If US exports are displaced internationally, organic grain will

³⁴ Petaluma Poultry.

³⁵ Meatingplace.com, "A Tale of Two Firms' Rocky But Rewarding Launch of Organic Chicken", June, 2001.

³⁶ USDA, "Ag Outlook", June-July 2000

become more prevalent in the US. This will make it harder to find market opportunities. However, the growth in organic livestock and the accompanying demand for feed should provide market opportunities, particularly along the East and West coasts.

US consumers view Canada as clean, pure and unspoiled.³⁷

Opportunities exist for Canadian firms for: children's food, ready to eat meals or ingredients, ice cream, breakfast cereals, healthy snacks, health bars, prepared salads, fruits and vegetables, condiments, alcoholic beverages, and deserts.³⁸

9.7 Buyer List

Lists of potential buyers in the US follow. Some of the companies supply both conventional and organic products. More information on prospective buyers in the US is contained in the Appendix.

US Buyers List							
		Phone	Fax	E-Mail	Swine	Cattle	Sheep
EMTechnologies, Inc.	A Supplements	(520)629-9301	(520)629-9039	104066.1414@compuserve.com			
S&EOrganicFarms, Inc.	C Supplements	(661)334-2771	(661)325-2602	seorganic@aol.com			
QefiProjects	C Supplements	(949)699-6808	(949)699-6808	qefi@aol.com			
MidwestPrairies	I Supplements	(217)449-3792					
NatureSafeNatural&OrganicFertiliz	K Supplements	(800)252-4721	(859)572-2574				
Neptune'sHarvestFertilizers	M Supplements	(978)281-1414	(978)283-4111	ann@neptunesharvest.com	X	X	X
Agro-KCorporation	M Supplements	(763)780-4116	(763)780-4316	info@agro-k.com	X		
ParametricAssociates, Inc.	M Supplements	(314)892-0988	(314)892-1662				
Concentrates, Inc.	O Supplements	(503)234-7501	(503)234-7502	concinc@prodigy.net			
FertrellCompany	P Supplements	(717)367-1566	(717)367-9319				
ThorvinKelp	V Supplements	(540)864-5108	(540)864-5161				
VermontOrganicGrainCompany	V Supplements	(802)234-5433	(802)234-5723	vtorganicgrain@email.msn.com			
OmegaNutrition, Inc.	W Supplements	(360)384-1238	(360)384-0700	cs@omeganutrition.com			
MidwesternBio-AgProducts&Service	W Supplements	(608)437-4994	(608)437-4441		X	X	X
ChinoValleyRanchers	C Poultry Feed	(626)652-0890	(626)652-0893				
ClarksonGrainCo., Inc.	I Poultry Feed	(217)763-2861	(217)763-2111	cpco@one-eleven.net	X	X	X
DaleFilbrunFarmsInc.	O Poultry Feed	(937)787-4885	(937)787-4885		X		
Barry Farm Enterprises	O Poultry	(419)228-4640	(419)228-2895	bill@barryfarm.com			
Dale Filbrun Farms Inc	O Poultry	(715)964-1317	(715)964-1317				
Locust Acres Inc	N Poultry	(315)287-1126	(315)287-1896	gdehartsm@aol.com	X		
Homestead Healthy Foods	T Poultry	(830)997-2506	(830)997-5932	Richard@fbg.net			
Mekinejian Poultry Farm	N Poultry	(516)368-9320	(516)368-9320	farmboy368@aol.com			
McGeary Organics Inc	P Poultry	(717)394-6843	(717)394-6931				
Nature's Best Organic Feeds	P Poultry	(570)374-8148	(570)374-2007				
Petaluma Poultry Processors	C Poultry	(707)763-1904	(707)763-3924				
Shelton's Poultry Ins	C Poultry	(909)623-4361	(909)623-0634	turkbaron@sheltons.com			
Welsh Family Organic Farm	I Poultry	(319)535-7318	(319)535-7218				
Barry Farm Enterprises	O Pork	(419)228-4640	(419)228-2895	bill@barryfarm.com	X	X	X
Dale Filbrun Farms Inc	O Pork	(937)428-0033	(937)787-4885				
Vermont Organic Pork	V Pork	(802)767-4647	(802)767-4443	gloria@vermontorganicpork.com			
KWFarms	C Hay	(719)589-0429					
GreenTaraOrganics	K Hay	(316)652-7566		green_tara_organics@juno.com			
Nick'sOrganicFarm, L.L.C.	M Hay	(301)983-2167	(301)983-0290				
MontgomeryFamilyFarm	M Hay	(573)624-3709	(573)624-4391				
BrushCreekOrganic	N Hay	(701)873-5223	(701)873-2985				
MountainMeadowsFarm, Inc.	V Hay	(617)983-7663	(802)348-7331				
BreljeFarm	M Forage	(320)864-5460	(320)864-2457				
WallFarms	N Forage	(505)477-2340					

³⁷ DFAIT, "The Natural/Organic Food Market in the United States", 2000.

³⁸ DFAIT, "The Natural/Organic Food Market in the United States", 2000.

		US Buyers List						
		Phone	Fax	E-Mail		Swine	Cattle	Sheep
Valley Ranchers	C Feed	800.354.4503		eggscvr@pacbell.net				
Modesto Milling	C Feed	209.523.9167						
Willow Brook Feeds	C Feed	707.795.7190						
Petaluma Poultry Processors	C Feed	707.763.1904	707.763.3924					
Kremer Feed	C Feed			Julie Robinson@kremerfeed.com				
Kremer Feed	C Feed			Julie Robinson@kremerfeed.com				
NS Smith	I Feed	319.694.5124		sawport@juno.com				
David Ryan	I Feed			David.Ryan@admworld.com				
West Fork River Ranch	I Feed	319.983.2875		wfrsterken@cs.com				
CVK Farms LLC	M Feed	810.724.1476						
Network Trading Inc	M Feed	507.334.0348						
Northland Organic Foods Corp	M Feed					X		X
Organic Feed Company	N Feed	701.327.4249	701.327.4455					
Midwest Fertilizer Distributors	N Feed	402.372.5003		watermann@navix.net				
Krieger Farms	N Feed	402.336.3875		kriegerfarms@netnet.net				
Kremer Feed	N Feed			Julie Robinson@kremerfeed.com				
Kremer Feed	N Feed							
Kremer Feed	N Feed							
Dale Filbrun Farms	O Feed	937.787.4885						
Curly Tail Organic Farms	O Feed	740.694.8622						
Top Notch Feed	O Feed	503.640.9140						
Fertrell's	P Feed	717.367.1566	717.367.9319					
Kremer Feed	P Feed			Julie Robinson@kremerfeed.com				
Kremer Feed	P Feed			Julie Robinson@kremerfeed.com				
Kremer Feed	P Feed	717.374.8148		brobins@postoffice.pld.net				
McGeary Organic Inc	P Feed							
Organic Unlimited	P Feed	717.273.1555	717.273.2914	information@organicunlimited.com				
Kremer Feed	P Feed			Julie Robinson@kremerfeed.com				
Cornerstone Grain Processing	P Feed	610.693.5529						
Rocking Diamond	S Feed	805.343.7058		rockdiar@rapidnet.com				
Innovators	T Feed	409.830.5444		danehobbs@comwerx.net				
Good Earth Organic Farm	T Feed							
Southeast Poultry Feeds	V Feed	804.292.1744	804.292.6937	nhmartin@msinets.com				
Vermont Organic Grains	V Feed	800.564.8125						
Northwest Organic Foods LLC	W Feed	509.647.3400	509.657.3486	repp@televar.com				
Blue Ribbon Organic Feeds	W Feed	360.427.3208		parsonsgmo@aol.com				
S&S Grains LLP	W Feed	608.323.7297		conschar@win.bright.net				
Cashlon Farm Supply	W Feed	800.822.6671						
Golden Grains	W Feed	608.269.5150						
Horizon Organic	C Dairy, Feed							

		US Buyers List						
		Phone	Fax	E-Mail		Swine	Cattle	Sheep
Agreux Organics, Inc.	C Animal Feed	(601)587-0027	(601)587-9274					
Ojai Organics Feed	C Animal Feed	(805)646-5759	(805)646-3090	Ingredients@OjaiOrganics.com				
Pacific Soybean & Grain	C Animal Feed	(415)433-0867	(415)433-9494	info@pacificsoy.com				
Rocky Mountain Milling, LLC	C Animal Feed	(970)785-2795	(970)785-0575	davidr-co@bcm.com				
Grant Farms	C Animal Feed	(970)568-7654	(970)568-7655					
Welsh Family Organic Farm	I Animal Feed	(319)535-7318	(319)535-7218	wfof@meins.net				
Global Organics, Ltd.	M Animal Feed	(781)848-8844	(781)848-0774	info@global-organics.com				
North American Kelp	M Animal Feed	(207)832-7506	(207)832-6905	naik@noamkelp.com				
American Health & Nutrition/The Orga	M Animal Feed	(734)677-5570ex	(734)677-5572	ahn@organictrading.com				
Graham Farms	M Animal Feed	(517)433-2907	(517)433-2196	graham@glocomputers.com				
Graziers Supply & Management	M Animal Feed	(507)237-5162	(507)237-2343	dgunnink@greasedisbeet.com				
Northland Organic Foods Corporation	M Animal Feed	(651)221-0855	(651)221-0856	soybean@northlandorganic.com				
Northland Organic Seed & Grain Corp	M Animal Feed	(651)221-0855	(651)221-0856	soybean@northlandorganic.com				
Southern Co., The	N Animal Feed	(402)342-3500	(402)342-4493					
Alvarez Farms	N Animal Feed	(505)874-3170						
Organic Unlimited, Inc.	P Animal Feed	(610)593-2995	(610)593-2155					
Nature's Best Organic Feeds	P Animal Feed	(570)374-8148	(570)374-2007	krefeed@pld.net				
McGeary Organics, Inc.	P Animal Feed	(717)394-6843	(717)394-6931	sales@mcgearygrain.com				
Glenwood Foods, LLC	V Animal Feed	(804)561-3447ex	1(804)561-3228	gwoodfoods@aol.com				
Tio Grain Farms	V Animal Feed	(802)848-2423						
Northwest Organic Foods	W Animal Feed	(509)657-3400	(509)657-3486					
ACG Products, Ltd.	W Animal Feed	(219)625-5293	(219)625-6489	solutions@acgproducts.com				
LaBudda Group, Inc.	W Animal Feed	(262)375-9111	(262)375-9058					

			US Buyers List			Swine Cattle Sheep		
			Phone	Fax	E-Mail			
Twin Peaks Seed & Grain	C Buyer	(303)772-7333	(303)772-6854	twinsseed@aol.com				
Cross River Commodities	C Buyer	(203)428-6047						
Iowa Cat Processors	I Buyer	(515)486-2522						
Integrity Mills of Cresco	I Buyer	(319)547-5827						
Pattison Brothers	I Buyer	(319)425-3381						
Natural Products	I Buyer	(501)236-0852						
ProfitSeed	I Buyer	(515)456-4751						
Heartland Organic Marketing Coop	I Buyer	(712)827-4217						
Mycal	I Buyer	(515)386-2100	(515)386-3287	soyflake@netnet.net				
West Central Coop	I Buyer	(515)386-4144						
Frontier Cooperative Herbs	I Buyer	(319)227-7986						
J&L Grain Processors	I Buyer	(515)865-4255						
Pacific Soybean & Grain	I Buyer	(615)733-4202	(515)733-2184					
Grains of Iowa	I Buyer	(319)233-6504						
Clarkson Grain Co	I Buyer	(217)323-2350						
Pearcy Grain Services Inc.	I Buyer	(615)865-8181						
Heartland Mills	K Buyer	(319)379-4472						
American Health and Nutrition	M Buyer	(734)677-5570	(734)677-5572	ahn@organictrading.com				
Eden Foods	M Buyer	(517)456-7424	(517)456-6075					
R&J Farms	M Buyer	(313)724-0313	(313)724-0323			X	X	X
Ceres Organic Harvest	M Buyer	(313)426-1220	(313)426-5062					
Fair Exchange	M Buyer	(313)426-1220						
SunRay Milling Company	M Buyer	(517)676-2681	(517)676-3371			X	X	X
Purity Foods	M Buyer	(517)351-8231				X	X	X
Behm Seed	M Buyer	(612)674-3003	(320)674-3618	Behmm@aol.com				
Sigco Sun Products Inc	M Buyer					X	X	X
Sno Pac Foods Inc	M Buyer	(507)724-5281				X		
Dahlgren & Company	M Buyer	(218)281-2565				X		
American Growers Food	M Buyer	(218)984-3757	(218)984-3212	sof4@northernnet.com				
Swanny Flour Mill	M Buyer	(612)636-2174				X		X
McOla's Organic Milk	M Buyer	(507)237-5162	(507)237-2343					
Sunrich Inc	M Buyer	(507)451-4724						
AgriTrading	M Buyer	(320)587-2133	(320)587-6818			X	X	X
Frontier Commodities	M Buyer	(507)634-6080	(507)634-7838	soybn@aol.com				
Pure Pride	M Buyer	(507)357-4117				X	X	X
McCree Food Products Inc	M Buyer	(507)843-6130				X	X	X
Natural Way Mills	M Buyer	(218)222-3677				X	X	X
Nichl America	M Buyer	(218)222-3677						
Blooming Prairie Natural Foods	M Buyer	(612)378-6774	(612)378-6780			X	X	X
H. Brooks and Company	M Buyer	(612)331-8413	(612)331-1520	pbrooks@hbrooks.com				
Roots and Fruits	M Buyer	(612)379-3030	(612)379-8649			X	X	X
North Country Seeds	M Buyer	(507)736-2004				X	X	X
World View Food	M Buyer	(612)475-0188				X		
Orientad	M Buyer	(612)687-4210						
Northeast Organic Foods	M Buyer	(651)221-0855	(651)221-0856					
Access Marketing	M Buyer	(612)439-0800	(612)439-0807	ami.bears@worldnet.att.net				
Great River Milling	M Buyer	(507)457-0334						
Amber Milling, Harvest States Coop	M Buyer					X		
Red River Commodities	N Buyer	(701)282-2600	(701)282-5325			X		
Roman Meal Milling Co	N Buyer	(701)282-8656	(701)282-8743					
Northern Organics	N Buyer	(701)256-2424	(701)256-2455			X		
Imperial Organic Coop	N Buyer	(701)424-3742						
SK Food International	N Buyer	(701)842-3929						
Grain Place Foods	N Buyer	(402)854-3195	(402)854-2586					
Ag Finder	N Buyer	(402)391-1023	(402)391-0898					
Mercantile Food Inc	N Buyer	(516)672-0180				X	X	X
Domestic Seed	S Buyer	(805)298-8611						
Stangle & Sons	S Buyer	(805)432-4030						
Heartland Organic Mill	S Buyer	(805)537-4220						
Arrowhead Mills	T Buyer	(808)384-8242						
Omega Nutrition	W Buyer	(800)881-3529	(804)253-4228	omega@istar.ca				
Barlow's Organic Oils	W Buyer	(208)380-2603						
DeLong Seed Co	W Buyer	(808)676-2256				X	X	X
CIRANDA	W Buyer	(715)586-1737				X		
Terra Palma	W Buyer	(715)581-1336	(715)581-1338					
CROPPY Organic Valley	W Buyer	(808)625-2602						
Golden Grains	W Buyer	(808)268-5150	(808)268-2150			X		
Builder Organic Beef	C Beef	(303)440-0981	(303)440-0982	karenpp@aol.com				
Brush Creek Organic	N Beef	(701)873-5223	(701)873-2585	jokuster@westtv.com				
Coleman Natural Meats Inc	C Beef	(303)297-8393	(303)297-0426					
Coleman Ranches Inc	C Beef	(303)460-0647	(303)460-8010	psalm5010@earthlink.net				
Dale Filtrun Farms Inc	O Beef	(937)428-0033	(937)787-4885					
Ervin's Beef	A Beef	(520)428-0033	(520)348-9812			X		
Graham Farms	M Beef	(517)433-2907	(517)433-2198					
Homebest Healthy Foods	T Beef	(830)867-2506	(830)867-5932	Richard@hfg.net				
Leurs's Lean Beef Company	K Beef	(806)296-7707	(806)296-6822	lb@leursteelebeef.com				
Locust Acres Inc	N Beef	(315)287-1128	(315)287-1896	gsharlam@aol.com				
Louis Dryfus Corporation	C Beef	(203)761-2217	(203)761-4808	maromd@lfcorp.com				
Meade Ranch	C Beef	(707)885-2304	(707)885-1361	uchm@mapanet.net				
Mountain Meadows Farm Inc	V Beef	(817)683-7863	(802)346-7332	bramint@aol.com				
Northwest Organic Foods	W Beef	(509)857-3400	(509)857-3488	repp@televar.com				
Organic Connection Australia	N Beef	(914)533-2170	(914)533-2406					

10. BARRIERS TO TRADE

10.1 Regulatory

The organic regulatory systems of the EU, the US, and Canada are not in alignment. The lack of regulatory harmonization constitutes a barrier to trade for organic products. The barriers are magnified in the EU by the fact that each of the member states also has at least one standard for organic products. The EU regulations provide the minimum standards. Each country and sometimes each certifying body can implement higher standards. It really is true that "you don't export to the EU, they import."

The most pertinent example of this is the fact that the EU standards allow organic livestock to be fed 10% to 20% non-organic feed until 2005 when it is assumed that the production of organic feed will have got up with demand. The UK, for example, uses the same standard in its legislation. Because feed mills produce feed rations using minimum cost analysis the importation of completely organic prepared feeds would not make business sense. The market would not pay for the unnecessary organic purity.

An Australian study on market opportunities for organic prepared feed in the EU also found that some certifying bodies such as Germany's Bioland and Naturland did not allow the importation of prepared feed from outside the EU.

Canadian organic exporters face another significant barrier in moving product into the EU. The EU treats organic imports from countries with "equivalent" standards differently from imports from "third" countries. Canada is classified as a "Third" country.

"Provisions are made for organic products from third countries where the third country has been recognized by the EU and where the products comply with production and inspection rules equivalent to those in the EU. The list of approved third countries is found in the Annex to Regulation 94/92. This regulation gives the requirements for application for inclusion in the list.

The competent authority or body in the third country must issue a certificate of inspection stating that the lot was obtained within these rules. A model of the inspection certificate is provided in Regulation 3457/92. The certificate must accompany the goods in the original copy to the premises of the first consignee.

Products shall be imported from a third country in appropriate packages or containers, which are closed in order to prevent substitution of the contents. The products must show identification of the exporter and any marks and numbers which identify the lot with the inspection certificate.

Canadian organic producers can be certified under the National Standard of Canada for Organic Agriculture developed by the Canadian Organic Advisory Board (COAB). However, this standard has not yet been approved to be equivalent to EU standards so Canada is not included on the list in Regulation 94/92. At the time of writing, Canada is planning to submit the organic standard to the Commission and will indicate that an inspection and accreditation system is being developed (COAB is applying to be an accredited certification body in Canada). The EU approval process involves an evaluation of the Canadian standard, the inspection system, and the certification organization. In order to be approved, the production and inspection standards must be equivalent to the EU standards and the inspection body in the third country should satisfy requirements of the EU standard EN45011 or the international standard ISO 65.

In the meantime, Canadian producers can export to the EU until 31 December 2005, subject to certain conditions. The importer must provide evidence to the Member State authority that the products are manufactured according to the EU production rules and are subject to inspection measures equivalent to the EU inspection scheme. Essentially, Canadian producers must conform with EN45011 or the equivalent ISO 65 to be eligible to export to Member States. The European standard was established in 1995, based on ISO 65, to ensure compliance of all certification organizations including those in third countries. It is the Member State's responsibility to assess third country compliance. This can be done by: (1) an official accreditation body in the third country or in the Member State; (2) a government authority in the third country; or (3) an authority in the Member State granting authorization.¹

None of Canada's organic certifying bodies have yet been accredited with ISO 65 status under the Standards Council of Canada (one, Pro-Cert has applied).

Some Saskatchewan producers are having problems with the ISO 65 requirement, although it is not a universal difficulty. The Saskatchewan Organic Certification Association reports problems with access to the EU because of the ISO requirement. Neither Pro-Cert or the Organic Crop Improvement Association, are however, experiencing any market EU or US access difficulties. The Canadian Organic Certification Cooperative is able to export to the UK without problem. The cost of obtaining ISO 65 certification is also a concern for some of the organic certification bodies operating in Saskatchewan. The recently announced Federal funds while helpful are not sufficient.²

¹ AAFC/DFAIT

² Conversations with Anne Ford (COCC), Rusty Plamondon (SOCA), Audrey Horkoff (OCIA), and Wallace Hamm (Pro-Cert).

The Canadian situation is exacerbated by the demise of the Canadian Organic Advisory Board. Divisiveness within the industry led to its demise. Alternatives are now being explored.

The US's new National Organic Program is supposed to be implemented in "phases" by October 2002. However, one Saskatchewan certifier reports that the US is prematurely enforcing some of the standards. For example US buyers now want water testing for livestock. There is also a great deal of uncertainty about what inoculants are acceptable. Under the new US NOP, USDA will review foreign certifiers in order to ensure the imports meet NOP standards.

10.2 Tariffs

Data on trade in organic products is extremely rare. In order to open the discussion on tariff barriers, Canadian and Prairie exports of oilseeds and peas are shown below. Exports to each of the aggregate target markets are also shown. As will be discussed in the next section, EU rules about GM oilseeds has reduced soybean and canola imports from Canada (and US) to a trickle.

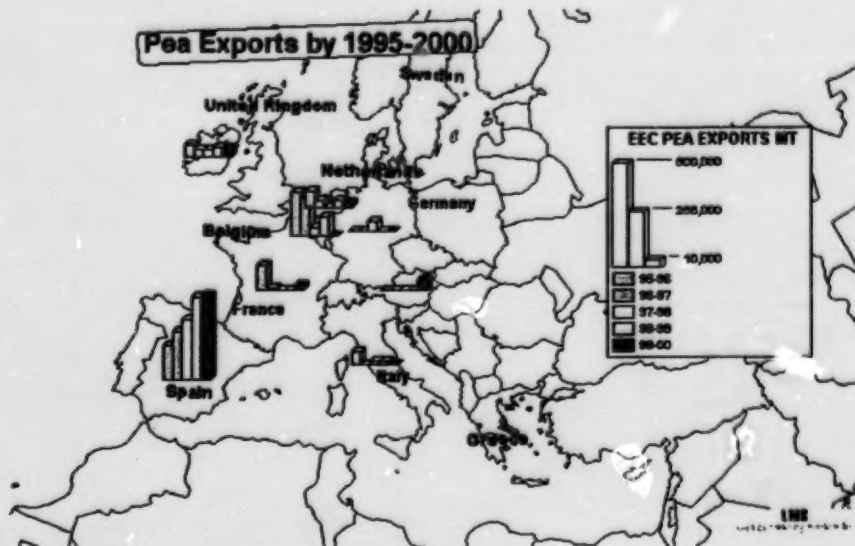
Canadian Soybean & Canola Exports, 000 CDN\$					
	1996	1997	1998	1999	2000
Soybean & Products					
<u>Total Exports</u>					
Canada	224,888	281,732	366,177	305,026	283,052
Manitoba	1,907	1,834	13,002	11,966	16,566
Saskatchewan	790	825	7,994	12,656	13,428
Alberta	13	673	23,211	58	1,714
<u>Exports to the EU</u>					
Canada	68,867	98,151	136,049	56,540	48,821
Manitoba	1,417	928	11,038	1,646	8,717
Saskatchewan	384	769	7,824	157	181
Alberta		662	23,187		
<u>Exports to the US</u>					
Canada	56,062	42,455	66,813	45,794	52,540
Manitoba	258	869	1,839	1,322	2,781
Saskatchewan		47		42	97
Alberta		11		11	89
Canola					
<u>Total Exports</u>					
Canada	1,036,000	1,262,000	1,712,000	1,335,000	1,150,000
Manitoba	238,328	278,244	454,652	345,949	296,630
Saskatchewan	412,707	560,627	749,824	546,018	468,516
Alberta	372,233	413,518	495,235	427,446	371,327
<u>Exports to EU</u>					
Canada	87,018	16,650	2,269	1,471	511
Manitoba	20,061	3,627	576	98	101
Saskatchewan	34,829	7,341	997	258	161

Alberta	20,061	3,627	576	98	101
<u>Exports to the US</u>					
Canada	119,733	143,064	158,844	86,733	79,048
Manitoba	27,031	30,882	43,722	25,436	21,555
Saskatchewan	45,867	60,820	66,592	32,793	27,850
Alberta	45,426	50,299	47,437	27,409	28,647
Industry Canada, Strategis					

In 2000, about 29% of Saskatchewan's pea exports were to the EU. The EU is the biggest customer for Saskatchewan flax.

Canadian Pea & Flax Exports, 000 CDN\$					
	1996	1997	1998	1999	2000
Peas					
<u>Total Exports</u>					
Canada	271,362	303,380	333,105	384,165	402,749
Manitoba	37,288	75,729	47,440	36,810	43,849
Saskatchewan	168,435	168,204	201,255	233,041	236,489
Alberta	53,011	61,582	77,234	81,535	107,938
<u>Exports to EU</u>					
Canada	122,827	115,458	96,337	96,392	127,032
Manitoba	20,921	45,156	31,773	20,709	29,656
Saskatchewan	74,702	47,344	48,173	41,809	68,361
Alberta	26,615	22,561	13,543	11,868	20,680
<u>Exports to the US</u>					
Canada	11,541	14,931	12,928	10,762	8,443
Manitoba	3,780	5,981	5,510	4,482	3,872
Saskatchewan	4,323	5,928	4,703	3,475	2,969
Alberta	2,094	1,884	1,828	1,868	764
Flaxseed					
<u>Total Exports</u>					
Canada	219,022	339,982	324,302	189,890	167,685
Manitoba	106,547	143,135	123,943	73,248	64,380
Saskatchewan	169,771	188,763	192,320	112,182	99,376
Alberta	14,594	8,038	8,038	4,459	3,920
<u>Exports to EU</u>					
Canada	176,388	205,122	209,552	95,911	106,776
Manitoba	64,580	86,327	80,095	37,185	40,984
Saskatchewan	102,878	113,935	124,304	56,480	62,285
Alberta	8,853	4,840	5,152	2,245	2,497
<u>Exports to the US</u>					
Canada	77,600	91,880	73,756	65,684	39,507
Manitoba	28,408	38,742	28,197	25,206	15,196
Saskatchewan	45,283	50,952	43,681	38,926	23,389
Alberta	3,886	2,164	1,878	1,552	923
Industry Canada, Strategis					

The volume of Canadian pea exports by EU destination is shown below for the 1995 to 2000 time period. Spain accounted for 82% of Canadian pea exports in the 1999/00 crop year.



Current Saskatchewan exports of prepared feed and alfalfa meal and pellets to the EU, the US, and in total are shown below. The US is the most important market for Saskatchewan exports of animal feed. Within the US, Montana and North Dakota are the most important market. Japan accounts for almost 50% of Saskatchewan's exports of alfalfa meal and pellets. The US is the second largest market, with Texas and Puerto Rico the major destinations. Saskatchewan has very little prepared feed moving into the EU and no alfalfa meal and pellets moving there.

Saskatchewan Exports, 000 \$

	1999	2000
Prepared Feed		
Total	2,364	3,255
EU	246	176
US	1,862	2,658
Montana	466	738
North Dakota	586	514
South Dakota	424	278
Nebraska	34	208
Washington	83	160
Alfalfa Meal & Pellets		
Total	17,543	24,790
EU	10	-

Japan	12,181	11,893
US	1,724	5,553
Texas		2,394
Puerto Rico	324	1,798
North Dakota	65	652
Nebraska		237
Montana	191	163
Industry Canada, Strategis		

The EU's import tariffs on feed grains and prepared feeds are shown below. These tariffs are in effect for both Canada and the US. The tariff is shown in Euro's, US\$, and CDN\$ to make comparisons easier. Cereals face a tariff that varies from 47 CDN\$ for Quinoa and Buckwheat to 120 CDN\$ for common low quality wheat, corn, and sorghum. Peas, flax, canola, soybean and their products are tariff free as are alfalfa meal and pellets. Prepared feeds can face the highest tariff barrier. In terms of organic prepared feeds exported to the EU because they are unlikely to contain milk products they would face a 29 CDN\$ per tonne tariff.³ Prepared feeds containing milk products can face extremely prohibitive tariffs – as much as 1,211 CDN\$ per tonne.

Import Tariffs by the EU, as of June 1, 2001

Commodity	Exchange Exchange			Inspections
	Tariff	0.8426	1.2774	
	% Euro/Net	US\$/Net	CDN\$/Net	
	Tonnes	Tonnes	Tonnes	
			Import	Regime
Corn Wheat & Spelt - Low Quality	95	80	121 CI	FITIN, VETER
Corn	94	79	120 CI	FITIN, VETER
Oats - High Quality	89	75	114 CI	FITIN, VETER
Oats - Low Quality	89	75	114 CI	FITIN, VETER
Barley	93	78	119 CI	VETER
Sorghum	94	79	120 CI	FITIN
Rye	93	78	119 CI	FITIN, VETER
Quinoa	37	31	47 CI	VETER
Triticale	93	78	119 CI	FITIN, VETER
Canary Seed	0		Free	FITIN, VETER
Buckwheat	37	31	47 CI	VETER
Dry Peas	0		Free	SANIM, VETER
Soybean	0		Free	SANIM, VETER
Soybean Meal & Flour	4		Free	SANIM, FITIN, VETER
Soybean Oil Cake	0		Free	FITIN, VETER
Flaxseed	0		Free	VETER
Flaxseed Oil Cake	0		Free	FITIN, VETER
Canola	0		Free	FITIN, VETER
Canola Oil Cake	0		Free	FITIN, VETER
Sunflower	0		Free	SANIM, FITIN, VETER
Cottonseed	0		Free	SANIM, VETER

³ Clarification has been requested on the tariff rate quotas listed for prepared feed with greater than 15.5% protein by weight.

Oilseed Flours & Meals (not Mustard)	0		Free	SANIM, FITIN, VETER
Alfalfa Meal & Pellets	0		Free	FITIN, VETER
Prepared Feeds				
> 15.5% protein by weight	23	19	29 CI	VETER
	0 TRQ		CI	VETER
	0 TRQ		CI	VETER
	7% TRQ		CI	VETER
> 10% and < 50% milk products by weight	498	420	636 CI	VETER
> 75% milk products by weight	948	799	1211 CI	VETER
Exchange rate June 11, 2001				
SANIM: Sanitary Inspection				
FITN : Phytosanitary Inspection				
VETER: Veterinary Inspection				
nettaric				
taric.com				

In the very near past, the EU's tariff protection was much higher. However, under Agenda 2000, the intervention prices for cereal have been reduced. This decreases the duty that must be paid. The import tariff was equal to 155% of the interventional price minus the world price. Prior to July 1, 2000, the tariff outside of the tariff rate quota was generally prohibitive. The reduction in intervention prices has had a large effect on duties. ⁴

Access to the US market for the above products is tariff free.

Organic feed grains face a tariff barrier in the EU. The size of this barrier ranges from 47 CDN\$ to 120 CDN\$ per tonne. Organic peas and flax can move into the EU tariff free. Conventional product already moves there and there is much antidotal evidence of Saskatchewan organic peas being sold in the EU. Prepared organic feed may face a tariff barrier in the EU. The size of the tariff is dependent on the composition of the prepared feed.

There are no tariff barriers for Saskatchewan organic feed and prepared feed moving into the US.

10.3 GMO's

The debate over the acceptability and safety of GMO crops has led to several interesting issues in crop production worldwide. More importantly for the purpose of this study it has led the creation of a significant barrier for the sale of organic feed grains and meals of certain crops. The major issues for this study are as follows:

- The EU countries have rejected the production, use or import of GMO crops. The EU has experienced the two most publicized food safety events of the last 25 years; mad cow disease and foot and mouth. Although the regulators and industry officials were quick to reassure the public that

⁴ USDA, FAS GAIN Report, "EU Grain and Feed Annual Report 2001", 2001.

everything was under control, the events have lead the consuming public to reject the reassurances on a whole range issues including the safety of GMO's. **Until there is a strong reason i.e. health benefits, the EU will prohibit GMO's for the foreseeable future.**

- The adoption of the GMO crops has been fast. Soybeans, corn, canola and cotton have all seen high-speed adoption of GMO's. In these cases the major trait allowed the producer to lower his/her costs through reduced and/or increased efficiency of pesticide use. Limited acreage of traits, which add value to the use of the crops through specialized output traits have been realized. **The net effect is the lowering of the amount of conventional grain that could be included in organic rations even at low rates.** This has lead to large increases in prices of non-GMO soybeans in some areas of the USA. There may be some return to non-GMO crops in some areas, however some traits are just too important to not use. The best example is cotton with the addition of the bT gene. This addition reduces the use of insecticides for up to 10 applications in the growing season to zero. No grower is going to away from bT cotton so that some of the third class product can be used as animal feed. (First class product, cotton fiber, second-class, cottonseed oil)
- **The rapid adoption of GMO canola is particular problem for western Canadian organic growers.** It's unlikely that with the ability of canola pollen to spread with the air currents that there is any 100% GMO free canola in most areas of western Canada. This is not a health problem because all canola varieties grown in Canada have been tested in the registration system and are proven to have the same nutritional quality as non-GMO varieties. However it is unlikely that grower can claim 100% GMO free canola. This does not put Canada at much of disadvantage, because most of our competitors have exactly the same problem.
- **There is no generally acceptable test for the presence of modified genes.** This means that testing to prove the presence or absence of modified genes is not available on a shipment or lot basis. **This has the effect of cutting off trade from any area where GMO are grown to any area where they are not accepted.** This means that in the short term the EU will have to use only product produced in the EU in crops which a pollen drift concern.

These issues are significant concerns for the organic industry. The development of traits through genetic modification that provide production or health benefits without measurable side effects will create even greater challenges for the organic producer.

11. SASKATCHEWAN COMPETITIVENESS

11.1 Transportation Costs

Transportation And Handling Issues

The transportation of organic feeds to markets is by bulk rail in hopper cars or by truck (bags or bulk) or by domestic – marine containers (bag or bulk). The mode of choice is dependent upon the customer needs and the market that a producer-processor is serving.

When securing transportation services, most buyers are concerned with reliability, transit time, efficiency, low cost, and minimizing damage. Organic processors/producers, however, are most concerned with the **identity preservation** of the product. Thus, they must follow other, non-standard shipping standards, which may add **higher service charges**. Furthermore, in order for a producer or processor to maintain their organic certification they must use the transportation-material handling standards and procedures in order to maintain their certification.

The transportation of organic materials requires more diligence in the choice of carriers and the lowest cost may not be the key driver in choosing a carrier. **The equipment type and condition is a significant concern amongst organic producers/processors.** Therefore, communications between shippers and transportation service providers must be clear and understood to ensure that expectations are met in providing reliable and consistent service and equipment. The organic producer must clearly communicate their needs for equipment to ensure that their needs are met. Too many times equipment may be declined because of misinformation about the stringent equipment conditions that organic shippers require.

There is not one set of standards for transportation and handling for organics that is used and recognized as the **global organic standard**. Each region of the world EU, USA, Canada and Australia all has different rules and procedures for shipping organic products. Rules may also vary within a region (for example by country in the EU). There are minimal standards but they are not consistent, so what may be used in one country may not meet another's minimal standard. Thus, the application of standards to be followed varies to the markets that producers-processors are shipping. **This creates uncertainty.** Producers-processors must be knowledgeable on the minimal standards to be used. All of the standards are similar in their objectives and application to maintain product integrity or identify preservation.

The following are examples of some of the shipping standards that are presently being followed by processors.

- Shipping, to the EU from Canada requires different standards and procedures to follow than shipping within North America. QAI is the only EU accredited certifier of shippers in North America. QAI verifies shipment certificate as filled out by shipper. The processing fee is \$30. The following conditions and procedures need to be followed and these are contained in EEC 2092/91 Art 11, regulation:
 - Shipment verified by QAI
 - Certificate to be filled out
 - \$30 US processing fee for each EEC approval submitted to QAI.
- When shipping organics to the USA markets, shippers may follow the OCIA International standards. Their standards are as follows:
 - Handling and storage facilities must be inspected by OCIA unless exempted.
 - Cannot be transported in fashion that may compromise the organic integrity.
 - Certified products cannot be stored with non-certified goods unless packaged, labeled or otherwise segregated to insure integrity.
 - Audit trails and documentation must be kept.
 - Transportation records must provide name of product, declaration of organic status, lot number, owner of product, amount shipped, clean truck documentation, buyer of product and location of product loading and unloading.

A lack of enforcement may result in the standards being applied inconsistently.

The voluntary Canadian organic standards with respect to packing and transportation are as follows"

"9.3 Transportation

9.3.1 To prevent commingling of organic and non-organic foods during all classes of transportation, all organic products shall be physically segregated from non-organic products.

9.3.2 Facilities used for the transportation of organic food product shall be free of:

- a. Non-organic product residues to minimize the potential for commingling***
- b. Invertebrate and vertebrate pests***

9.3.3 Equipment used in the transportation of organic food products shall be equipped and maintained using methods appropriate to the food product being transported, and cleaned using methods appropriate with the Permitted Substances List.

9.5 Packaging Materials

9.5.1 Organic products shall be packaged in food grade packaging materials, or with such materials that will not cause a loss of organic integrity, or otherwise increase commingling, contamination and/or pest infestation.

9.5.2 A recycling and return system for packaging materials should be employed wherever possible.¹

Because there are many organic certification groups around the world, there are many shipping and transportation procedures to follow. Because of the timing and intent of this study, we did not undertake a thorough review and compared the standards to minimal types. **The Saskatchewan government may want to address this in the future to develop minimal standards to follow and also to compare and educate growers-processors to the types of information and certificates that may have to be used by producers when entering new markets.**

Organic Supply Chain Cost Options to Markets

There are four main transportation options used to service markets in North America and one option to the EU.

1. Truck – (Bags-Bulk)
2. Rail –bulk
3. Rail –Boxcar
4. Intermodal
5. Marine Container (EU) (insufficient volume for bulk shipping on vessels)

Organic feed grains to the US would use bulk rail or truck or container. Containers would be used for movement to the EU. Prepared feeds would use truck (US), intermodal or container. Prepared feeds would be bagged in 50 to 100 lbs bags. On bulk container shipments processors have lined the container with plastics to prevent contamination. Another option is to use bladder bags, which is one large bag that is enclosed within the container. They are used by the lubricant industry.

These shipping options vary in their competitiveness because of the number of carriers that are servicing these trade lanes by geographic region. **Truck is the most competitive mode** because of the number of carriers although it may not provide

¹ National Standards of Canada, "Organic Agriculture", June 1999.

the lowest cost to market in North America. **Bulk rail tends to be the least cost in North America, but has the longest transit times to market.** Intermodal freight provides faster service than direct rail but not as fast as trucking direct.

Shipping organic products by trucks to the US markets offers processors/producers a wide range of choices. However, certain regions of the US have higher costs for Saskatchewan based shippers because of the lack of backhaul opportunities from these areas for freight destined back to Saskatchewan. Thus, **rates are higher to the Pacific Northwest, California and Northeastern United States markets.** Rates to the Midwest market states of Minnesota, Wisconsin, Illinois and Iowa have lower costs and are more competitive for shippers because of the availability of backhaul.

We contacted various trucking, rail and ocean companies to gather freight information and costs to compare those markets identified that have the most potential for growth to Saskatchewan.

In costing the various markets the following assumptions were used in pricing the transportation alternatives.

- Truck freight to the US payload of 18 tonnes, product in bags pallets or 1 tonne totes.
- US Intermodal freight payload of 18 tonnes
- Intermodal shipments within Canada may be loaded to 27 tonnes if the shipper is located on a Primary road.
- Oversea Container rates were for 20-foot containers, holding 21 tonnes per load.
- All carriers would inspect equipment before it is provided to the organic producer as they may decline the equipment due to condition.
- Rail shipments use bulk hopper cars, weight 90 –92 tonnes
- EU truck weights 25 tonnes
- EU trucking cost at \$2 per running mile
- Conversion rate US\$ to CDN \$ 1.52

Cost to US Selected Markets

The following regions and cities give a representation of the types of market transportation costs to reach markets. These costs are estimated from the various carriers and are not contracted rates that would guarantee rates and equipment. In

most circumstances contracted rates may be lower by \$2-4 per tonne. However, for the purposes of this study the relevant costs to the markets are more important.

Table 1: Estimated Comparison of Transportation Costs to Selected US Markets

COMPARISON SUPPLY CHAIN COSTS FOR ORGANICS									
Saskatoon to USA									
STATE	Location	Truck Carrier A Cost \$/Mt	Truck Carrier B Cost \$/Mt	Truck Carrier B Cost \$/Mt	Truck Transit	Bulk Rail Cost \$/Mt	Rail Transit	Intermodal Cost \$/Mt	Intermodal Transit
WA	Seattle	\$111.11	\$92.83	\$100.00	3	\$44.00	7	\$131.67	4
OR	Portland	\$141.67	\$107.75	\$116.67	3	\$44.00	7	\$148.33	4
CA	San Francisco	\$136.67	\$150.09	\$147.22	3	\$70.00	9	NA	7
WI	Madison	\$72.22	\$87.39	\$101.39	3	\$44.00	7	NA	4
MN	Minneapolis	\$56.94	\$65.49	\$81.94	2	\$35.00	6	NA	4
IA	Des Moines	\$72.22	\$82.22	\$88.61	2	\$40.00	7	NA	4
MI	Saginaw		\$112.01	\$137.50	3	\$46.00	9	NA	4
NY	Elmira	\$152.22	\$157.81		4	\$68.00	10	\$125.61	7
PA	Lancaster	\$182.50	\$165.14	\$181.94	4	\$61.00	12	\$178.78	7

Source : JBM Trucking, RSB, TransX, CP RAIL, CN RAIL

As can be seen in the table, **bulk rail provides the least cost to markets**. Trucking is the next least cost. The cost of Intermodal was dependent on which carrier has the most competitive access.

Cost to access **Midwest markets** by Rail range from \$35 –45 whereas trucking costs range from \$50 –90 dependent upon the carrier. Intermodal freight is not a competitive option to this region.

Cost to access **Eastern US markets** New York and Pennsylvania by Rail range between \$61 –70 dependent upon if the delivery is to a short line carrier. Truck costs to this region range between \$150-180 per tonne. Intermodal costs range from \$127 to 178/ tonne and are less than direct trucking.

Costs to the **Pacific Northwest and California** for rail range from \$44 to 70/ tonne and for truck from \$92 –150/tonne. Intermodal costs were \$130-148/tonne.

In comparison the costs to service these markets from **Manitoba and Alberta** would typically be \$10/tonne less or more depending upon the direction, eastbound versus westbound. **Alberta would be \$10 less to western markets and \$10 more to eastern markets**. The same would apply to Manitoba in being \$10 less to east and Midwest markets.

Saskatchewan Cost to EU

In comparing the market access cost to European markets we used **source-loading container as the mode of choice** because of the need for Identify Preservation and

compared it to boxcar stuffing via port of Montreal. We contacted container lines, rail and terminal services and received freight indications to cost the movements to the ports of Felixtowe (UK) and Antwerp (Belgium).

The cost to ship from Saskatoon to Felixstowe, UK using the different options is as follows: (Figures in CDN \$/tonne)

BOXCAR	INTERMODAL	Container Direct
\$157.87	\$141.87	\$183.00

The cost to ship from Saskatoon to Antwerp, Belgium using the different options is as follows: (Figures in CDN \$/tonne)

BOXCAR	INTERMODAL	Container Direct
\$149.72	\$133.72	\$138.75

US Organic Comparison Cost To the EU

To benchmark US producer costs to market we compared current costs for animal feed to the EU using the most recent data available.

We evaluated the published USDA transportation rates for container shipments of animal feed from East Coast Ports (New York) to the EU using the port of Antwerp as a basis to benchmark what US producers would pay. The USDA evaluates the shipping costs for USA AG shippers from different ports to various world markets. They compare the shipping lines, costs and transit. In addition they also estimate the relative market share of each carrier by month and by calendar year. The costs from New York to Antwerp are shown for a for a one year period below.

USDA Ocean Rates Animal Feed, East Coast to Antwerp

Date	Container Size	Base Rate	Fuel Surcharge	CAF	THC	Total	Payload	Cost/MT US\$	Cost Cdn\$/mt Exch. Rate 1.52	Source	Market Share Calendar Year	Transit Days
Jan-01	20 foot	\$0	\$0			\$0	21 mt	\$0.00	\$0.00	Kline	22%	
	20 foot	\$350	\$36		\$300	\$1,106	21 mt	\$42.34	\$64.66	Hyundai	15%	
	20 foot	\$2,700	\$0			\$2,700	21 mt	\$103.83	\$157.85	Evergreen	20%	
Aug-00	20 foot	\$875	\$0			\$875	21 mt	\$41.67	\$63.33	Kline	31%	10
	20 foot	\$980	\$0			\$980	21 mt	\$37.69	\$57.29	Evergreen	11%	11
May-00	20 foot	\$875	\$0			\$875	21 mt	\$41.67	\$63.33	Kline	27%	10
	20 foot	\$1,340	\$0	0.00%	\$0	\$1,340	21 mt	\$51.34	\$78.34	COSCO	14%	11
	20 foot	\$980	\$0			\$980	21 mt	\$37.69	\$57.29	Evergreen	17%	9
Jun-00	20 foot	\$835	\$0			\$835	21 mt	\$39.76	\$60.44	Evergreen	65%	10
	20 foot	\$990	\$28	20.00%	\$420	\$2,636	21 mt	\$101.38	\$154.10	COSCO	14%	11
	20 foot	\$0	\$0			\$0	21 mt	\$0.00	\$0.00	Mitsui	7%	9
Jun-99	20 foot	\$875	\$0			\$875	21 mt	\$41.67	\$63.33	Kline	38%	10
	20 foot	\$700	\$0		\$420	\$1,120	21 mt	\$43.08	\$65.48	Evergreen	30%	23
WEST COAST												

Source: USDA Ocean Rate Bulletin, Animal Feed, March 31, 2001

The costs per container have ranged between **900 US\$ to 1,300 US\$ per container**. Costs are dependent upon the carrier, time period and demand. These fluctuate monthly. Based on 21 tonne per container, the average cost per tonne is **\$43 US\$**. In addition to this cost, the inland freight could vary from **\$45-55 US\$** to ship product from Montana or North Dakota to New York. Thus, the total landed cost originating from a producer would be estimated at **88 US\$ – 95 US\$ per tonne** or **134 CDN\$ to 144 CDN\$**.

Eastern European Logistic Cost Comparison

To benchmark the costs that Eastern European organic producers are paying to markets we compared the freight costs from **Prague, Budapest and Bratislava**. These cities are in key organic producing areas in the Eastern Europe. The following market cities were selected: Berlin, Copenhagen, Antwerp, London and Paris. We contacted a trucking company in the Czech Republic to quote rates from Prague to the selected cities. From the rates quoted we assessed the distance in kilometers and estimated that the following rate levels would indicate the relative costs to the EU producer to ship organic feed. The average payload of a truck in the EU for these quotes was 25 tonne per load on the Continent and 24 to England. The distance to markets and the relative costs between origin and destination organic supply-demand are shown below.

Distance in Kilometres					
From/To	Berlin	Copenhagen	Antwerp	London	Paris
Budapest	922	1,833	1,538	1,771	1,561
Bratislava	660	1,060	1,324	1,580	1,270
Prague	340	740	1,006	1,310	1,000
US\$/mt					
From/To	Berlin	Copenhagen	Antwerp	London	Paris
Budapest	\$36.88	\$73.32	\$61.52	\$70.84	\$62.44
Bratislava	\$26.40	\$42.40	\$52.96	\$63.20	\$50.80
Prague	\$20.40	\$40.00	\$31.20	\$66.25	\$38.80
CDN\$/mt					
From/To	Berlin	Copenhagen	Antwerp	London	Paris
Budapest	\$56.06	\$111.45	\$93.51	\$107.68	\$94.91
Bratislava	\$40.13	\$64.45	\$80.50	\$96.06	\$77.22
Prague	\$31.01	\$60.80	\$47.42	\$100.70	\$58.98

Eastern European Comparative Costs to Market

Source : EST International Transport, Logistic Marketing Services

Organic producers in the Czech Republic can reach key demand areas for costs ranging between \$31 to 100 per tonne CDN\$. At these costs Eastern European producers have a distinctive cost advantage to reach markets in the EU.

Comparative Cost Comparison to Antwerp

To benchmark the market costs of Saskatchewan producers relative to North Dakota and Eastern European producers we used **Antwerp** as a basis. The following compares the costs in CDN\$/tonne from previous sections in the report.

Origin

Saskatchewan	\$ 135-140
North Dakota	\$ 130 - 134
Czech Republic	\$ 47

Thus, an Eastern European producer has at least a \$80 freight cost advantage in this market as compared to North American suppliers. Producers in North Dakota face lower transportation costs to Antwerp than Saskatchewan producers.

11.2 Competitors

Organic producers in the US face lower market entry hurdles into the EU than Canadian producers. This is primarily because the US has enacted a national standard for organic agriculture. The examination of the transportation costs indicated that North Dakota producers faced slightly lower transport costs into the EU. The chapter on the US market contains detailed information on organic production in the US.

Eastern European countries are strong competitors in the EU organic market. These countries face lower transportation costs. In addition, the EU treats some countries, like the Czech Republic and Hungary as equivalent in terms of importing. This gives these countries much better access than either Canada or the US.

The following section provides information on organic farming in the Czech Republic:²

- ❑ Agricultural markets have been liberalized although government intervention in the milk and cereal markets does occur. WTO commitments are met. Since 1989 land has been privatized and by 1999 the process was 85% complete. The breakdown in ownership type is: corporate (40%), cooperative (34%), individual (24%), and state enterprises (2%).
- ❑ The farm financial situation is poor with significant farm debt and poor liquidity. About 70% of farms are in serious financial difficulties.
- ❑ Organic agriculture has grown rapidly since 1989 and in 1999 there were 110,000 ha. In 1998 direct support was introduced for organic producers. This resulted in a large increase in land under conversion. Most of the fully organic land is grassland. The main exports are barley, buckwheat, spelt, and rye.
- ❑ Estimated production for 1999 is shown below. Organic grain production is concentrated in Moravia. Most production is sold in the conventional market.

**Organic Production
in Czech Republic, 1999**
Quantity Units

² Organic-Europe, "Organic Farming in the Czech Republic"

Wheat	2,830	Tons
Rye	1,316	Tons
Barley	1,134	Tons
Corn	240	Tons
Oats	1,281	Tons
Milk	4,657	Litres
Dairy Products	816	Tons
Bulls for Meat	4,610	Head
Hogs for Meat	543	Head
Sheep for Meat	1,835	Head
Laying Hens	196	Head
Organic-Europe, "Organic Farming in the Czech Republic"		

- The national standards are laid out in the Methodical Instruction. These standards are binding and failure to honor them is a criminal offense. The Czech Republic was granted equivalence status with the EU as of February 4, 2000.

12. SWOT ANALYSIS

12.1 Overall

In 2000, Saskatchewan Agriculture and Food undertook a SWOT (strengths, weaknesses, opportunities, and threats) analysis of the Saskatchewan organic industry. It did this through a series of interviews with producers. The analysis identified the following strengths, weaknesses, issues, and opportunities:

Strengths:

- ❑ Environment – pristine, environmentally sound
- ❑ Demand - Growing global demand, along with mainstream stores promoting organic products
- ❑ Supply – increasing, high quality, lower land and input costs, currently little GMO impact
- ❑ Producers – committed, skilled, experienced, knowledgeable, motivated
- ❑ Industry – long established, represents a future for farm families, grass roots certification process, well organized marketing sector

Weaknesses:

- ❑ Supply – lack of mass, little research and development
- ❑ Producers – some “in” for wrong reasons; unwilling to invest in vertical integration; need younger producers; lack of marketing ability
- ❑ Industry – fractured; little communication, protectionist attitude; no national unified standards and certification process; lack of training; lack of government support; no check-off; lack of pricing and market information
- ❑ Trade – lack of market access, high transportation costs

Issues:

- ❑ Supply – GMO’s; prices fall with growth; variability of output and input prices; chemical applicator hazards;
- ❑ Producers – attitudes of conventional producers entering sector; knowledge transfer to new producers; knowledge hoarding; communication problems among producers;

- Industry – requires a unified voice; multinationals' focus on biotechnology; standards and certification; research and development (production; greater SAF involvement)
- Trade – market and broker identification; multinationals block direct access to markets;

Opportunities:

- Environment – sustainability;
- Demand – domestic market; promotion of Saskatchewan organics; consumer education; targeting of consumer buyer groups;
- Supply – growth in livestock production and year-round vegetable production;
- Industry – viability of small farms; value-added development; new generation marketing cooperatives;

12.2 Feed and Prepared Feed

This study has focused on market opportunities for organic animal feed and prepared feed. As a result of our research, we see the following strengths, weaknesses, issues, and opportunities for Saskatchewan's organic feed producers and prepared feed processors:

Strengths:

- Growing demand for organic meat, poultry products, eggs, and dairy products.
- Growing demand for organic flax because of the need to replace organic soybean in feed rations.
- Growing demand for organic protein feeds in the EU.
- EU market acceptance of Saskatchewan organic peas.
- Canadian reputation for a pristine environment.
- Extension by small certification bodies.
- Good backhaul potential for some US regions.

Weaknesses:

- ❑ High transportation costs to EU market relative to competitors.
- ❑ Growing self-sufficiency in organic feed in the EU.
- ❑ Canola has been polluted by GMO varieties.
- ❑ Lack of industry infrastructure – data; research and development; human resource training and development; organization; strategic marketing and promotion;
- ❑ Export orientation of organic grains and oilseeds producers limits industry development – livestock; value-added enterprises;
- ❑ Preference for locally produced organic animal feed and extensive use of roughage in livestock diets (sometimes enforced by regulations) limits export potential.
- ❑ Fragmentation and smallness of sector makes it difficult to guarantee consistent supply of animal feed to large-scale buyers.
- ❑ Marketing is predominately relationship based which inhibits information sharing and market access.
- ❑ Whole farm focus in organic agriculture limits specialization and trade in organic feed.

Issues:

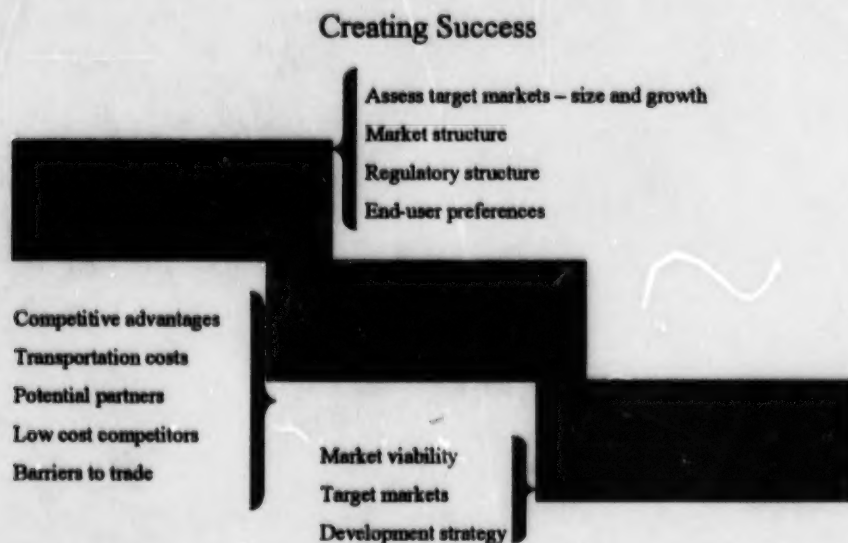
- ❑ Lack of Canadian mandatory standards.
- ❑ ISO 65 certification – market access requirement; cost;
- ❑ Subsidization of organic production by the EU.
- ❑ Patience shown by EU for organic feed supply to increase.
- ❑ Premature enforcement of new US organic standards.
- ❑ Industrialization of organic sector in the US.
- ❑ Lack of harmonized international organic standards.

Opportunities:

- ❑ Leverage growth in Saskatchewan organic prepared feeds and animal feeds through expansion of the Saskatchewan organic livestock industry.
- ❑ Market and promote Saskatchewan's organic sector - pristine environment; integrity; quality;
- ❑ Grow and develop industry through collaborative efforts of producers, processors, service sectors, educational institutions, and government. – Develop a vision and strategies to achieve vision; implement strategies!

13. RECOMMENDATIONS

The approach of this study was to utilize the evaluation of markets and the assessment of Saskatchewan's competitive position to identify target markets and develop recommendations for future growth and development.



13.1 Evaluation and Assessment Summary

The following tables summarize the information about market attractiveness and potential and Saskatchewan's competitiveness in the UK, Denmark, France, Germany, and the US.

Target Market - UK	
Organic Retail Market	Overall retail market for organic food has grown from 450 M US\$ in 1997 to 900 M US\$ in 2000. It has been growing by about 20% to 25% annually.
Specific Organic Products	Produce, dairy, and cereals and baking have the largest product shares of the organic retail market. Although sales of organic meat are very small they are growing rapidly because of food safety concerns.
Organic Production	Organic livestock production is increasing but it is unlikely to reach even 5% of total production by 2010.
Target Animal Species	Poultry, eggs, and hogs are expected to see the most growth. These commodities also require organic feed much of which is imported. The diets of beef and

	dairy animals are grass based and thus there is lower potential feed grain/prepared feed usage.
Organic Feed Industry	Until 2005, organic feed is allowed to contain 10% to 20% non-organic content. Mills produce to this standard. Little interest in importing prepared feed because of inadequate margins, high tariffs, content regulations reduce need to source outside, and believe production and consumption should occur in close proximity.
Current Import Sources	Except for organic protein, Europe has a sufficient supply of organic feed grains. Non-GMO soybean is generally imported.
Barriers to Trade	EU regulation allowing lower organic content in prepared feed limits potential to export prepared feed from Saskatchewan to this market. Organic philosophy places a value on production and consumption occurring in close proximity. Canadian exporters also require ISO 65 accreditation to enter the market. Organic canola from western Canada is unlikely to be GMO free and thus cannot be used in organic animal feeds. Depending on the content, prepared feed can face prohibitive tariffs into the EU. Tariffs on organic feed grain range from 47 to 121 CDN \$/tonne.
Competitiveness of Saskatchewan Products	The cost to ship organic product from Saskatoon to Felixstowe, UK were found to be \$158 CDN \$/tonne for boxcar stuffing at Montreal; 142 CDN \$/tonne for intermodal movement; and 183 CDN \$/tonne for direct container movement. Organic producers in the Czech Republic can reach the UK for about 100 CDN \$/tonne. Producers in North Dakota and Montana face slightly lower transportation costs. Hungary and the Czech Republic are considered to be equivalent to the EU in terms of organic production standards. This provides much better access to the EU market. US producers will benefit in terms of market access when the implementation of the NOP is complete.
Potential for Saskatchewan Exports	Limited potential for organic prepared feed. Organic peas and flaxseed could be used as a protein ingredient in feed.

Target Market - Denmark	
Organic Retail Market	Overall retail market for organic food has grown from

	300 M US \$ in 1997 to 600 M US \$ in 2000. The market has been growing by 30% to 40% annually.
Specific Organic Products	Dairy products have the largest share of the organic retail market. Currently, organic dairy products are in excess supply. Eggs also have a significant share. Organic beef and pork sales are small.
Organic Production	Production is dominated by the organic dairy sector. Organic pig production is growing rapidly. Organic eggs represent greater than 8% of total egg production.
Target Animal Species	Laying hens and pigs offer the most potential.
Organic Feed Industry	One major feed company produces about 33,500 tonnes of organic feed each year, primarily for beef animals. This company not interested in importing prepared organic feed because of high tariffs and preference for local production.
Current Import Sources	Imports of organic grains and pulses are from Germany, the Netherlands, Hungary, Poland, and Czech Republic..
Barriers to Trade	EU regulation allowing lower organic content in prepared feed limits potential to export prepared feed from Saskatchewan to this market. Danish regulations bias imports towards raw and semi-processed products. Organic philosophy places a value on production and consumption occurring in close proximity. Canadian exporters also require ISO 65 accreditation to enter the market. Organic canola from western Canada is unlikely to be GMO free and thus cannot be used in organic animal feeds. Depending on the content, prepared feed can face prohibitive tariffs into the EU. Tariffs on organic feed grain range from 47 to 121 CDN \$/tonne.
Competitiveness of Saskatchewan Products	The cost to ship organic product from Saskatoon to Antwerp were found to be \$150 CDN \$/tonne for boxcar stuffing at Montreal; 134 CDN \$/tonne for intermodal movement; and 139 CDN \$/tonne for direct container movement. Organic producers in the Czech Republic can reach Denmark for about 60 CDN \$/tonne. Producers in North Dakota and Montana face slightly lower transportation costs. Hungary and the Czech Republic are considered to be equivalent to the EU in terms of organic production standards. This provides much better access to the EU market. US producers will benefit in terms of market access when the implementation of the NOP is complete.
Potential for Saskatchewan	Limited potential for organic prepared feed. Organic

Exports	peas and flaxseed could be used as a protein ingredient in feed.
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Target Market - France	
Organic Retail Market	The organic market at the retail level was 1,20 M US \$ in 2000 compared to 720 M US\$ in 1997. The market has been growing by 20% to 25% annually.
Specific Organic Products	Cereals and bakery products, dairy, fresh fruits and vegetables have the largest organic retail shares. Organic meat sales are very small but appear to be growing by 20% annually.
Organic Production	In 1999, France had over 5.4 M organic table chickens and 1.4 M organic laying hens. It is the largest producer of organic poultry and eggs in Europe.
Target Animal Species	Organic pigs, table chickens and sheep are experiencing the fastest growth. The availability of organic protein is said to be limiting the expansion of the organic hog sector.
Organic Feed Industry	Six companies produce and distribute organic feed. The focus is on poultry feed because of the size of the poultry and egg sectors.
Current Import Sources	Organic protein is in short supply.
Barriers to Trade	EU regulation allowing lower organic content in prepared feed limits potential to export prepared feed from Saskatchewan to this market. Within France, high transportation costs limit the distance products are shipped. Organic philosophy places a value on production and consumption occurring in close proximity. Canadian exporters also require ISO 65 accreditation to enter the market. Organic canola from western Canada is unlikely to be GMO free and thus cannot be used in organic animal feeds. Depending on the content, prepared feed can face prohibitive tariffs into the EU. Tariffs on organic feed grain range from 47 to 121 CDN \$/tonne. Other barriers included cultural and language differences. The time required to obtain an import license can be lengthy.
Competitiveness of Saskatchewan Products	The cost to ship organic product from Saskatoon to Antwerp were found to be \$150 CDN \$/tonne for boxcar stuffing at Montreal; 134 CDN \$/tonne for intermodal movement; and 139 CDN \$/tonne for direct container movement. Organic producers in the Czech Republic can reach France for about 59 CDN \$/tonne. Producers in North Dakota and Montana

	face slightly lower transportation costs. Hungary and the Czech Republic are considered to be equivalent to the EU in terms of organic production standards. This provides much better access to the EU market. US producers will benefit in terms of market access when the implementation of the NOP is complete.
Potential for Saskatchewan Exports	Organic protein is in demand. This implies opportunities for Saskatchewan organic flaxseed and peas.

Target Market - Germany	
Organic Retail Market	The retail market for organic food in Germany was 2,500 US \$ in 2000 compared to 1,800 US \$ in 1997. The market is growing by about 10% annually.
Specific Organic Products	The products with the greatest shares of the organic retail market are fruits and vegetables; dairy, eggs, and tofu; bread and bakery; and baby food. Meat sales are small, only 3% of the market in 1998. At the retail level, meat sales are growing the fastest (25% annually).
Organic Production	Germany is almost self-sufficient in organic grain. Trade liberalization and CAP have resulted in lower grain prices. Prices have also been depressed by cheap imports from Eastern Europe. In 1998, Germany was the second largest producer of organic dairy cows, beef cows, and hogs with 65,000, 150,000, and 50,000 animals respectively. It had about 700,000 organic poultry birds. Organic milk is in an excess supply position.
Target Animal Species	Hogs and poultry require relatively more feed grain in their production and their prepared feeds are relatively more expensive than beef.
Organic Feed Industry	The organic prepared feed industry is very competitive because of the oversupply of organic cereal grains and the availability of cheap imports from Eastern Europe. Bioland and Naturland apparently prohibit the importation of organic feed from outside Europe.
Current Import Sources	German organic feed mills source soybean from Europe, potatoes and protein from the Netherlands, and corn from Austria and Hungary.
Barriers to Trade	EU regulation allowing lower organic content in prepared feed limits potential to export prepared feed from Saskatchewan to this market. Organic philosophy places a value on production and consumption

	occurring in close proximity. Canadian exporters also require ISO 65 accreditation to enter the market. Organic canola from western Canada is unlikely to be GMO free and thus cannot be used in organic animal feeds. Depending on the content, prepared feed can face prohibitive tariffs into the EU. Tariffs on organic feed grain range from 47 to 121 CDN \$/tonne. The time required to obtain an import license can be lengthy.
Competitiveness of Saskatchewan Products	The cost to ship organic product from Saskatoon to Antwerp were found to be \$150 CND \$/tonne for boxcar stuffing at Montreal; 134 CDN \$/tonne for intermodal movement; and 139 CDN \$/tonne for direct container movement. Organic producers in the Czech Republic can reach Germany for about 31 CDN \$/tonne. Producers in North Dakota and Montana face slightly lower transportation costs. Hungary and the Czech Republic are considered to be equivalent to the EU in terms of organic production standards. This provides much better access to the EU market. US producers will benefit in terms of market access when the implementation of the NOP is complete.
Potential for Saskatchewan Exports	There appears to be very limited potential for prepared organic feed from Saskatchewan in the Germany market. Depending on price levels, there could be opportunity for organic peas and flaxseed as a protein source.

Target Market - US	
Organic Retail Market	The US has the largest retail market for organic food in the world. In 2000 it was valued at 8,000 M US \$. It has grown by 15% to 20% annually.
Specific Organic Products	Currently produce represents about 65% of the organic retail market. Other major segments are dairy products and frozen foods. Although meat sales are very small they are expected to grow by 30% each year until 2003. Dairy product sales are forecast to grow by 37% each year until 2003.
Organic Production	Organic livestock and poultry production is concentrated along the west coast, in the northeast, and in the Chicago-Midwest hub.
Target Animal Species	Organic poultry (table and eggs), beef, and dairy production appear to be growing the fastest. They are also subject to the most industrialization.
Organic Feed Industry	Organic feed mills have clustered in the areas of

	concentrated organic production. It appears that the focus is on the use of locally produced organic feed grains, supplemented with other grain obtained through brokers.
Current Import Sources	Organic non-GMO protein is in short supply. Organic brokers are likely to continue to source organic grain from Saskatchewan to fill shortages.
Barriers to Trade	The US NOP does not allow non-organic feed to be fed to organic livestock except for in emergency situations such as those caused by a natural disaster. The OCIA has a requirement for 55% of organic feed fed organic livestock to come from the farm itself or from local cooperative efforts. Under new standards, USDA will certify foreign certification agencies prior to allowing imports. Some Saskatchewan exporters are experiencing market access problems because of the premature implementation of the new standards. There are no tariff barriers into the US.
Competitiveness of Saskatchewan Products	Cost to access Midwest markets by Rail range from \$35 –45 whereas trucking costs range from \$50 –90 dependent upon the carrier. Intermodal freight is not a competitive option to this region. Cost to access Eastern US markets New York and Pennsylvania by Rail range between \$61 –70 dependent upon if the delivery is to a short line carrier. Truck costs to this region range between \$150-180 per tonne. Intermodal costs range from \$127 to 178/ tonne and are less than direct trucking. Costs to the Pacific Northwest and California for rail range from \$44 to 70/ tonne and for truck from \$92 –150/tonne. Intermodal costs were \$130-148/tonne. It would cost about \$10 less to ship to western markets from Alberta and \$10 more to ship to eastern markets. Shipping costs from Manitoba would be about \$10 less to eastern markets and \$10 more to western markets.
Potential for Saskatchewan Exports	The survey did not find any feed mills or end users interested in importing prepared organic feed. Interest was expressed in organic feed grains and in organic flaxseed.

13.2 Recommendations

Our recommendations flow from our market evaluation, competitive assessment, and SWOT analysis.

Our first recommendation concerns the development of the **Saskatchewan organic prepared feed and animal feed sector**. Our market evaluation did not reveal major market opportunities for organic prepared feed exports. Regulations and the organic industry's preference for local production, roughage based diets, and for imports closer to "home" reduce the export attractiveness of prepared feeds.

In the EU, organic protein appears to be in short supply and that may be an opportunity for Saskatchewan producers of peas and flaxseed. Saskatchewan organic feed faces stiff competition from Eastern European sources. Countries like the Czech Republic face very low transportation costs in major EU markets and have much better access to these markets because their organic standards are viewed as being equivalent to the EU. Organic prepared feed and feed grain can face significant tariff barriers in the EU. Organic production in the EU is likely to continue to grow rapidly because of the generous subsidies that it receives.

In the US, our survey did not find any feed mills or end-users interested in importing organic prepared feed from Saskatchewan. Again, organic protein is in demand and this can provide opportunity for producers of peas and flaxseed. Searches have found only two organic feed mills outside of Saskatchewan.¹

We see two different strategies to develop the industry; product differentiation and broader industry development.

In the **product differentiation strategy**, users in the target markets would have to be convinced that organic feed and prepared feed from Saskatchewan is a superior product compared to what is available in their countries. Some options to implement this strategy are as follows:

- Prove that the production of livestock in the EU or USA using Saskatchewan produced organic feeds was **better for the environment**. This could be done by an examination of the energy use, greenhouse gas emissions and environmental impact as proposed above, but including the feed production process. The approvals would need to come from Organic certifying bodies and trade bodies within each target market. The question to be answered, "Is there an energy use, green house gas emission and/or environmental impact advantage to Saskatchewan organic feed production?"
- Develop a market pull approach by **convincing organic consumers** within each target market that animal products produced using Saskatchewan produced organic feed were better than those produced using other organic feed. This is a large consumer marketing challenge. Saskatchewan organic feed producers would have to form agreements with livestock producers, processors and retails in each target market to be successful. The question to

¹ Banner Feeds, located in Camrose Alberta, manufactures organic poultry feed. Homestead Organics, located in Berwick Ontario, manufactures organic animal feed.

be answered is "Will the organic consumer would pay extra for a product in the organic market supported by a large advertising and market campaign?" "Who are potential partners in which market?"

- **Develop joint ventures with producers in target markets based on production advantages that result from using specific feed formulations available from Saskatchewan produced organic feed.** These could include animal health benefits, quality and/or purity guarantees and exclusion of ingredients only available from Saskatchewan source. The question to be answered is "What production benefits can be offered by feed produced in Saskatchewan versus the other areas or local production?"

The alternate strategy for industry development is to **leverage growth in Saskatchewan organic prepared feed and animal feeds through the expansion of the Saskatchewan organic livestock industry.** If Saskatchewan continues to focus exclusively on exporting organic feed grain, little economic activity or value-added processing will be created in the province. The review of the market clearly demonstrated that in the target countries the feeding industry developed in response to organic livestock production. Tailoring the development of Saskatchewan's organic feed sector to the needs of an emerging provincial/western Canadian organic livestock sector would enable both sectors to expand faster and with less risk. A larger provincial/regional market for organic feed would also reduce the residual organic feed production that is sold in the conventional market because of a lack of opportunities. **The development of an organic livestock sector would create more economic value-added.**

The second recommendation is about **strategic positioning for the organic industry.** The Saskatchewan industry has many strategic positioning options available to it. For example, it could market its products as low cost. Alternatively, it could market the integrity and quality of its products. Yet another alternative is to highlight Saskatchewan's pristine environment.

Our examination of the market indicates that that billing its product as low cost would be a poor choice for Saskatchewan organic producers/processors. Inexpensive could be viewed to be the same as low quality/poor organic integrity. While costs matter in production, they are less important in marketing in the organic sector. Relative to other competitors, Saskatchewan is not necessarily the least expensive source of organic feed. **The organic philosophy is much more in alignment with using integrity and product quality to strategically position the industry. This should be accentuated with environmental purity.**

Our recommendation, therefore, is to **develop strategic marketing plans that portray Saskatchewan's organic sector in terms of organic integrity and purity, accented by the pristine environment.** It may also be possible and desirable to link

these development efforts with the natural beef and bison sectors. This could enable the creation of a critical mass of branded Saskatchewan products.

Our third recommendation is to grow and develop the organic industry through collaborative efforts of producers, processors, service sectors, educational institutions, and government. If the industry is unable to grapple with the ISO 65 issues, then the government must step in. The question of whether Canada should have mandatory or voluntary organic regulations needs to be reviewed. The voluntary approach does not provide consumers any protection and may be interpreted globally as laxness. Research and development needs of the industry must be addressed as well as extension and information needs. Asymmetric and incomplete information hinders the broad-based development of the industry. Efforts should be made to change this. It may be desirable to tackle these issues at the western Canadian level rather than at the provincial level.

There are a variety of industry developmental models that could be adapted. Denmark is currently implementing its second organic strategy. It formed the **Organic Food Council**. Its mandate is to encourage, watch, and assess development opportunities; assess advisory and research efforts; develop proposals for development activities; and comment on organic standards. The Council has many initiatives beyond the expansion of primary production. For example it is attempting to increase product quality and stimulate product development; boost domestic sales; develop nearby export markets; protect and grow the organic brand; and promote the industry to environmentalists and governments.

The **Organic Centre for Wales** at the University of Wales, Aberystwyth is a good example of an organic center of excellence. Its main activities include research and development; training and education (including a BSc Organic Agriculture); organic demonstration farm network; advisory services; and publications.

The **State of Minnesota** assists the organic sector in a variety of ways. A small amount of financial assistance is provided to producers converting to organic production. Farmer initiated research is supported through grants for on-farm demonstrations. Department staff provides technical information to organic growers. The department also provides assistance for market development, consumer education, and trade shows. The University of Minnesota has a multi-year organic conversion program that involves research, education, and production support.

14. APPENDIX

14.1 Feed Mill And End-User Survey

Good Day:

We are seeking information about the market for organic animal feed and we hope that you can assist us by filling out this short survey. The information will be provided to Saskatchewan Agriculture and Food, Government of Saskatchewan, Canada and is intended to benefit organic producers and feed manufacturers in the province. Please fax the form back to 306-

Your Company's Name:

1) What animal types do you produce or purchase feed for? (please circle)

Beef
Dairy
Laying Hens
Table Chickens
Turkey
Sheep
Goats

How much feed do you purchase each year?

Tonnes or Bushels

2) What method is used to ship your production to the customer?

% bulk
% bag

3) What organic certification system(s) do you use?

4) What does this system(s) cost you per year or per purchase?

5) What are your main and secondary protein sources when making organic feed?
(please circle)

Main:
Wheat
Barley
Oats
Feed Peas
Flaxseed

Secondary:
Wheat
Barley
Oats
Feed Peas
Flaxseed

6) What are your main and secondary energy sources when making organic animal feeds?

Main:

Secondary:

7) What do you use as a source of vitamins and minerals?

8) How do you purchase the grains?

% from Broker

% from Local Sources

Average Distance

9) Are your present sources of raw grain adequate to meet your demands?

10) Are any specific grains expected to be short supply?

11) Do you import grain produced outside your own country for the production of organic animal feed?

12) If so from where?

13) What method for receiving raw grain do you use? (Please circle)

Bulk truck

Bulk Rail

Container

Bag

14) Do you purchase prepared feed from other companies?

15) Do you import prepared feed and if so from where?

16) Would you be interested in imported organic feed?

17) What import tariffs do you pay on imported grains or feed?

18) Have you experienced any problems in receiving organic grains caused by transportation or logistical problems?

19) Do you have an opinion or experience with the quality and/or acceptability of organic grains grown in Saskatchewan, Canada for use by your company?

20) Could you provide an indication of the average price of organic feed by product?

21) Could you indicate how fast you think the market for organic feed is growing?

Thank you for your participation.
Sincerely

14.2 Saskatchewan Organic Producer Survey

Good Day:

We are seeking information about the market for organic animal feed and we hope that you can assist us by filling out this short survey. The information will be provided to Saskatchewan Agriculture and Food and is intended to benefit organic producers and feed manufacturers in the province. Please fax the form back to 306-

Your Name:

1) What organic grains do you produce and approximately how much?

Wheat
Barley
Oats
Flaxseed
Feed Peas

2) Do you produce organic animals on your farm? (please circle)

Beef
Dairy
Eggs
Turkey
Broiler Chickens
Sheep
Goats
Buffalo

3) What method is used to ship your production of grain to the customer? (please specify by grain type)

Bulk Truck

**Bulk Rail
Container
Bag**

- 4) What percentage of your production is contracted?
- 5) What are your expectations regarding payment?
- 6) What organic certification system(s) do you use?
- 7) What does this system(s) cost you per year or per sale?
- 8) How do you sell your production?
 - a) % Direct to End-User
 - b) % Through Broker
 - c) % Conventional Market
- 9) Are you able to meet the demands of your present customers?
- 10) Are there any grains, which you feel, will be in short supply because of production constraints?
- 11) In the past year, was any of your grain exported for use as animal feed?
- 12) Do import any items used in producing organic livestock from outside Saskatchewan and if so what?
- 13) Are there import tariffs on the items you must purchase outside Saskatchewan and if so what is there size?
- 14) Have you experienced any transportation or logistical problems in shipping organic grains or organic animal production?
- 15) Do you have an opinion on which countries are the best potential markets for organic grains grown in Saskatchewan?
- 16) When you deal with foreign customers have you gained any insight about how Saskatchewan organic grain is perceived? For example, are customers attracted to Saskatchewan grain because of its quality, the quality and organic assurance, or price?

Thank you for your participation.
Sincerely

14.3 Animal Feeds – A Primer

Types of Animal Feeds:¹

- Animal Feed Ingredients:
 - Energy Feeds:
 - Whole grains and vegetables (corn, wheat, barley, oats, rye, triticale, and potatoes) and by-products from milling and other processing (wheat bran, wheat middlings, wheat shorts, corn cobs, rice bran, dried beet pulp, and groats).
 - Corn is the major energy feed in the US, representing 80% of feed grain fed to animals.
 - Processing methods are: grinding (on-farm processing); pelleting (by commercial feed mills and particularly used for swine and poultry feeds); flaking, soaking, roasting, and extruding.
 - Protein Feeds
 - Soybean meal:
 - Represent two-thirds of the protein fed US livestock.
 - Major source of protein for swine and poultry
 - 44% contains hulls
 - 49% does not contain hulls and is for poultry and swine
 - Produced by solvent extraction.
 - Cottonseed meal:
 - Used for beef cattle and fish.
 - Produced by solvent extraction.
 - Canola Meal:
 - Used for beef cattle
 - Produced by solvent extraction.
 - Minor Meals
 - Linseed meal, sunflower meal, safflower meal and peanut meal.
 - Produced by solvent extraction.
 - Corn Gluten Meal and Corn Gluten Feeds
 - Used as protein supplements for beef and dairy rations.
 - Are by-products of wet corn milling.
 - Brewers and Distillers Dried Grain
 - Used for beef and dairy
 - Are a by-product of fermentation

¹ USITC, "Industry & Trade Summary: Animal Feeds", January 2000.

- **Meat and Bone Meal:**
 - Fed to poultry and swine.
 - Produced from by-products of meat processing.
- **Fish Meal**
 - Major user is poultry but some is fed to young pigs and fish.
 - Produced by processing whole fish or derived from by-products.
- **Roughages:**
 - Feeds derived from legumes and grasses.
 - Consumed by grazing or after processing into hay and silage.
 - Most common roughage in the US is alfalfa hay.
- **Compound Feeds**
 - **Complete Feeds:**
 - Meet the total nutritional needs of the animal but do not always contain roughage.
 - **Supplements:**
 - Is a mixed feed that combines ingredient feeds with vitamins and minerals.
 - Requires additional grains or proteins to make a complete ration.
 - **Premixes:**
 - Feeds that contain one or more concentrated products (micronutrients, vitamins, and trace minerals) that are added to complete feeds.
 - **Medicated Feeds:**
 - Contain medicines such as antibiotics with a carrier.
- **Pet Foods:**
 - Dry food combine energy and protein feeds produced using an extruder or pelleting machine.
 - Canned pet foods contain either grain and meat products or mostly meat byproducts.

14.4 Organic Chicken Primer²

" Mash: a blend of feed ingredients, ground to a small size but not to a powder; mash can be in pellet form

Pellets: small kernels of compressed mash

Concentrate: a blend of protein-rich foods, plus any other nutrients desired; usually

² Lionsgrip.com

fed together with a grain ration

Scratch: grains fed separately to chickens, usually scattered on the ground or litter of the coop

Grit: angular, hard crushed rock, preferably from granite, used by the chickens in place of "teeth" — seashells and bone CANNOT substitute for grit; grit should be free-choiced several times a month at least

Calcium: provided by sea shells, crushed bone, and fresh or dried greens — amounts need to be measured closely, if not free range

Protein: any food high in amino acids, used to build tissues; protein quality is determined by the "completeness" of the amino acid varieties in the food source; basically, meats, nuts, seed germs, and soy concentrates are protein sources

Amino acid: a molecule that is one building block of protein; there are many different amino acids, most of which can be manufactured in the body; the few that cannot must be supplied by foods

Vitamins: a general term meaning "life-giving";

Minerals: inert chemicals found in nature; kelp of all kinds supplies the complete spectrum of minerals

Free range: not controlled by fences, able to get to fresh greens and insects; as commercially used, this term allows fences, with minimum amount of space per bird being set by definition

Pastured poultry: hens kept in movable, usually wheeled, pens, moved daily over fresh pasture, creating delicious meat and nutritious eggs

Organic: inspected by government agencies, organic food sources must not contain traces of harmful chemicals; the term as currently used does not insure that poultry has been raised in the best possible way, only that it has near zero harmful ingredients

Pullets: female chickens under 1 year old

Hens: female chickens over 1 year old"

14.5 Best Us Prospects List

Poultry:

Garden Valley Organic, LLC

Anthony Dryak, President

W15918 State Road 95, Taylor

Taylor, WI 54659

Phone: (715) 964-1317 Fax: (715) 964-1317

web site: <http://www.gardenvalleyorganic.com>

McGeary Organics, Inc.

David R. Poorbaugh, President

P.O. Box 299

Lancaster, PA 17608-0299

Phone: (717) 394-6843 Fax: (717) 394-6931 Toll Free: (800) 624-3279

web site: <http://www.mcgearygrain.com>

Nature's Best Organic Feeds

William D. Robinson, President

P.O. Box 38

Kreamer, PA 17833

Phone: (570) 374-8148 Fax: (570) 374-2007 Toll Free: (800) 767-4537

web site: <http://www.organicfeeds.com>

Petaluma Poultry Processors

Darrel Freitas, Partner

P.O. Box 7368

Petaluma, CA 94955-7368

Phone: (707) 763-1904 Fax: (707) 763-3924

web site: <http://www.healthychickenchoices.com>

Shelton's Poultry, Inc.

Gary Flanagan, President

204 Lorraine Avenue

Pomona, CA 91767-5798

Phone: (909) 623-4361 Fax: (909) 623-0634

e-mail: turkbaron@sheltons.com

web site: <http://www.sheltons.com>

Beef:

Coleman Ranches Inc.

Cathy Coleman, Office Manager

P.O. Box 1688

Broomfield, CO 80020

Phone: (303) 460-0647 Fax: (303) 466-6010

e-mail: psalm5010@earthlink.net

Now Called Maverick Ranch

Guarantek Analytical Laboratories

John Murray
5300 N. Franklin
Denver, CO 80214
Phone: (303) 293-2157 Fax: (303) 297-1117
web site: <http://www.mavranch.com>

Laura's Lean Beef Company

Winona Rose, Vice President, Consumer Affairs
2285 Executive Drive, Suite 200
Lexington, KY 40505
Phone: (606) 299-7707 Fax: (606) 299-6822
e-mail: llb@laurasleanbeef.com
web site: <http://www.laurasleanbeef.com>

Organic Valley/CROPP Cooperative, Inc.

Helen Jo Gudgeon, Marketing Admin. Mgr.
507 West Main Street
Portland, OR 97211
Phone: (608) 625-2602 Fax: (608) 625-2600 Toll Free: (888) 444-6455
web site: <http://www.organicvalley.com>

Sunnyside Farms, LLC

David and Maggie Cole, Owners
P.O. Box 478
Washington, VA 22747
Phone: (540) 675-2627; (540) 675-3636 Fax: (540) 675-2740
e-mail: Organic777@aol.com
web site: <http://www.sunnysidefarms.com>

Eggs:

Egg Innovations, LLC

John Brunnquell, President
3420 Highway W
Port Washington, WI 53074
Phone: (262) 284-1619 Fax: (262) 284-9333
e-mail: john@egginnovations.com
web site: <http://www.egginnovations.com>

Garden Valley Organic, LLC

Anthony Dryak, President
W15918 State Road 95, Taylor
Taylor, WI 54659
Phone: (715) 964-1317 Fax: (715) 964-1317
web site: <http://www.gardenvalleyorganic.com>

McGeary Organics, Inc.

David R. Poorbaugh, President
P.O. Box 299
Lancaster, PA 17608-0299

Phone: (717) 394-6843 Fax: (717) 394-6931 Toll Free: (800) 624-3279

web site: <http://www.mcgearygrain.com>

NuCal Foods, Inc.

Charles Elste, President/CEO

P.O. Box 1386

Salida, CA 95368

Phone: (209) 545-1988 Fax: (209) 543-0641

e-mail: celste@nucalfoods.com

Organic Valley/CROPP Cooperative, Inc.

Helen Jo Gudgeon, Marketing Admin. Mgr.

507 West Main Street

Portland, OR 97211

Phone: (608) 625-2602 Fax: (608) 625-2600 Toll Free: (888) 444-6455

web site: <http://www.organicvalley.com>

Dairy:

Bart's ice cream is made from milk from Pioneer Valley Milk

Marketing Coop, Barts looks after the coop

Bart's Valley Foods

Gary L. Schaefer, General Manager/Treasurer

80 School Street

Greenfield, MA 01301

Phone: (413) 774-7438

e-mail: barts@valinet.com

web site: <http://www.bartshomemade.com>

Brown Cow West Corporation

Jennifer Wyneken, Office Manager

3810 Delta Fair Boulevard

Antioch, CA 94509-4008

Phone: (925) 757-9209 Fax: (925) 757-9160

Cabot is owned by AgriMark, a dairy coop with 1450 dairy producers

Cabot Creamery

Charlotte Green, Senior Vice President, Sales and Marketing Administration

1 Home Farm Way

Montpelier, VT 05602

Phone: (802) 371-1202 Fax: (802) 371-1210

e-mail: cgreen@together.net

web site: <http://www.cabotcheese.com>

Horizon has 6,700 organic cows

Horizon Organic Dairy

Chuck Marcy, President/COO

6311 Horizon Lane
Longmont, CO 80503
Phone: (303) 530-2711 Fax: (303) 530-6934 Toll Free: (800) 237-2711

web site: <http://www.horizonorganic.com>

Natural Dairy Products Corp.

Ned Mac Arthur, Vice President, Sales
P.O. Box 464

West Grove, PA 19390

Phone: (610) 268-6962 Fax: (610) 268-4172

web site: <http://www.natural-by-nature.com>

Nature's Best Organic Feeds

William D. Robinson, President

P.O. Box 38

Kreamer, PA 17833

Phone: (570) 374-8148 Fax: (570) 374-2007 Toll Free: (800) 767-4537

web site: <http://www.organicfeeds.com>

send to ken@modestomilling.com

Organic Cow of Vermont, LLC, The

Peter Flint, Co-Owner

P.O. Box 55

Tunbridge, VT 05077

Phone: (802) 685-3123 ext. 102 Fax: (802) 685-4332

e-mail: busy@ocowvt.com

Organic Valley/CROPP Cooperative, Inc.

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507 West Main Street

Portland, OR 97211

Phone: (608) 625-2602 Fax: (608) 625-2600 Toll Free: (888) 444-6455

web site: <http://www.organicvalley.com>

Stonyfield Farm, Inc.

Nancy Hirshberg, Director, Natural Resources

10 Burton Drive

Londonderry, NH 03053

Phone: (603) 437-4040 ext. 2270 Fax: (603) 437-7594

e-mail: Nancy_Hirshberg@Stonyfield.com

web site: <http://www.stonyfield.com>

Straus Family Creamery, Inc.

Albert Straus, President

P.O. Box 768

Marshall, CA 94940-0768

Phone: (415) 663-5464 Fax: (415) 663-5465

web site: <http://www.strausmilk.com>